FIG. 1

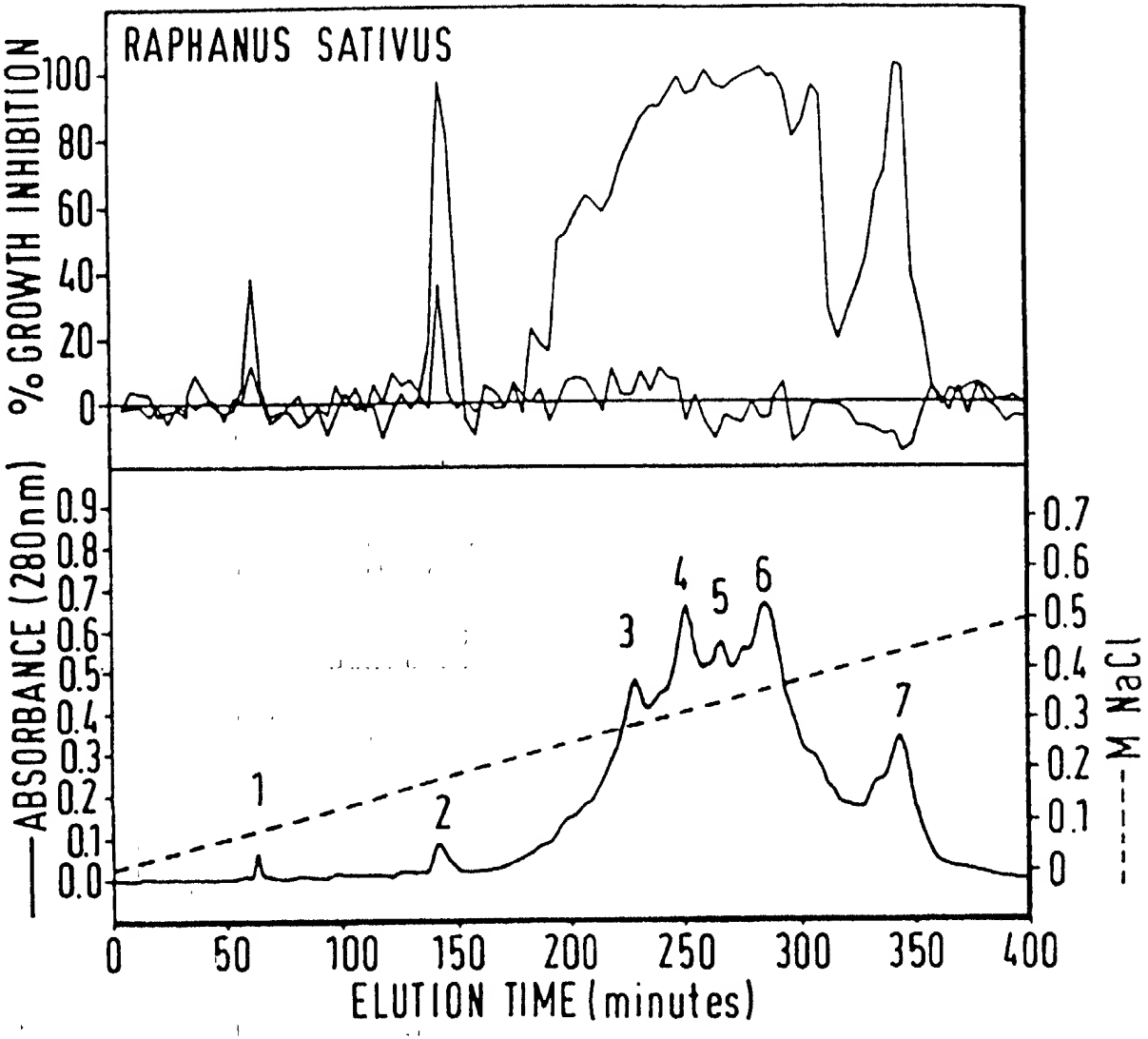


FIG. 2A

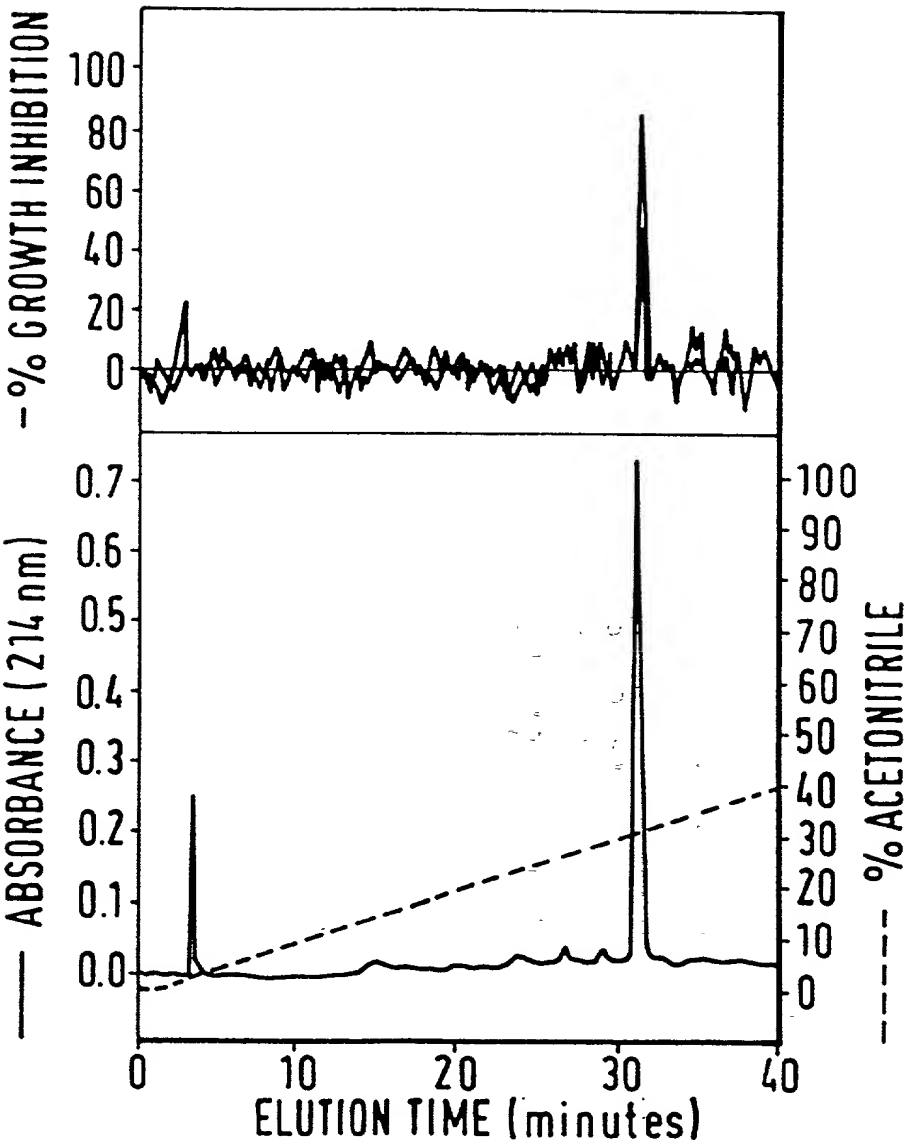

-% GROWTH INHIBITION
100
80
60
40
20
0
ABSORBANCE (214 nm)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
% ACETONITRILE
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
ELUTION TIME (minutes)

FIG. 2B

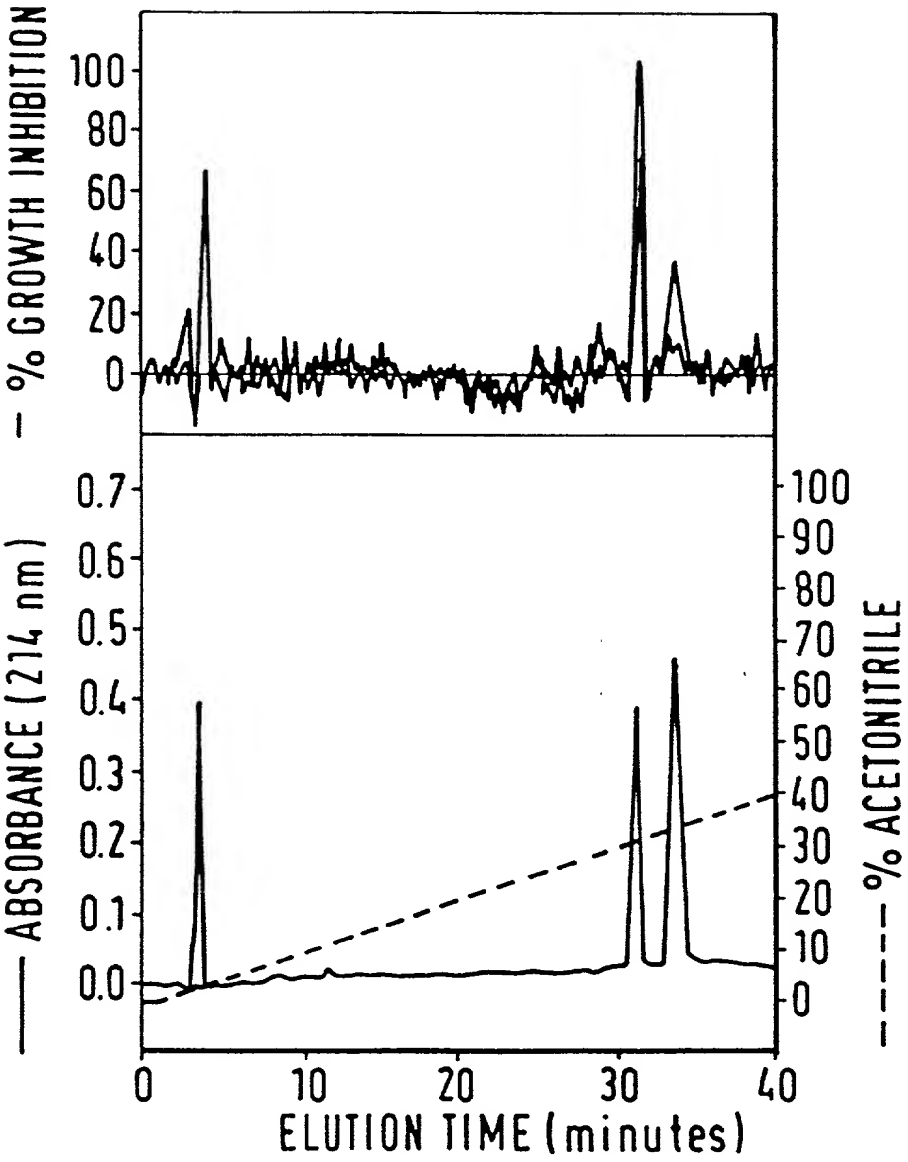

100
80
60
40
20
0
- % GROWTH INHIBITION
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
ABSORBANCE (214 nm)
100
90
80
70
60
50
40
30
20
10
0
% ACETONITRILE
0
10
20
30
40
ELUTION TIME (minutes)

FIG. 3

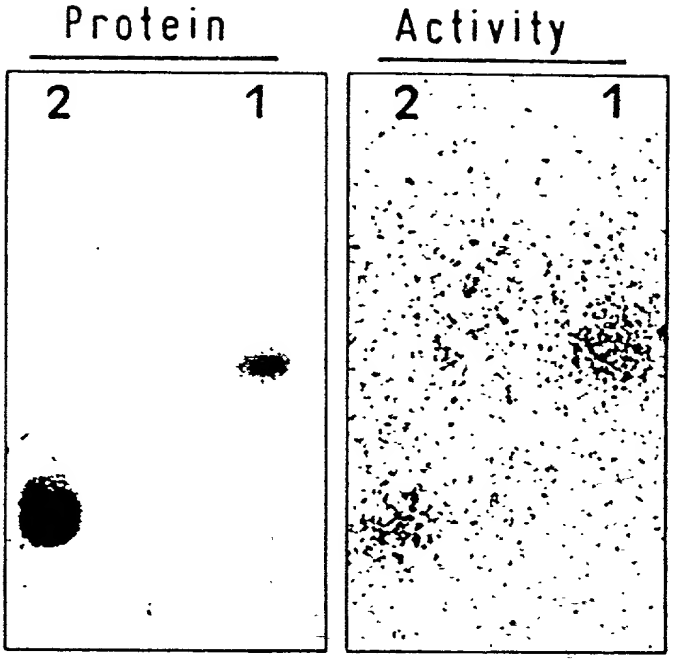


FIG. 4

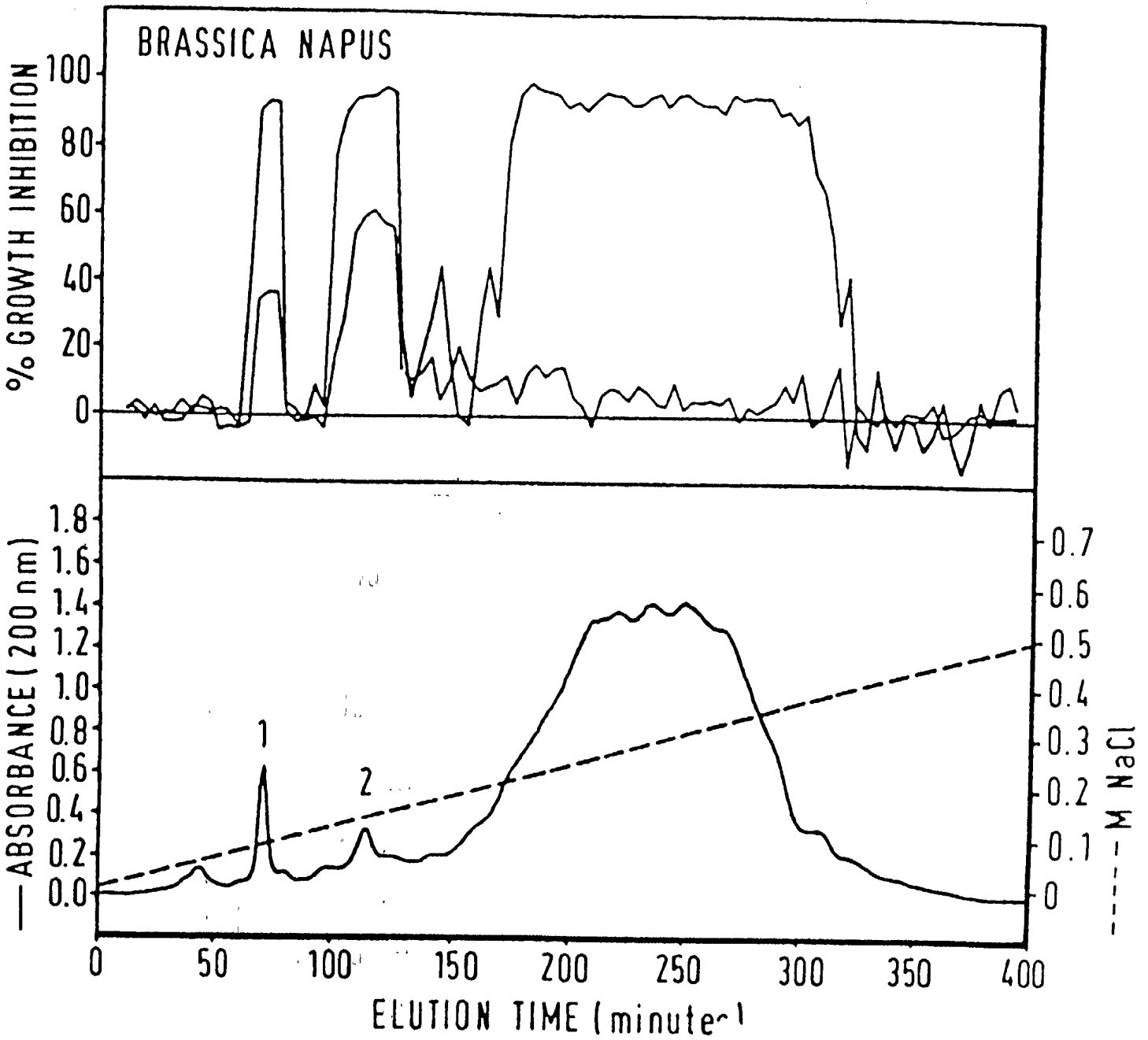
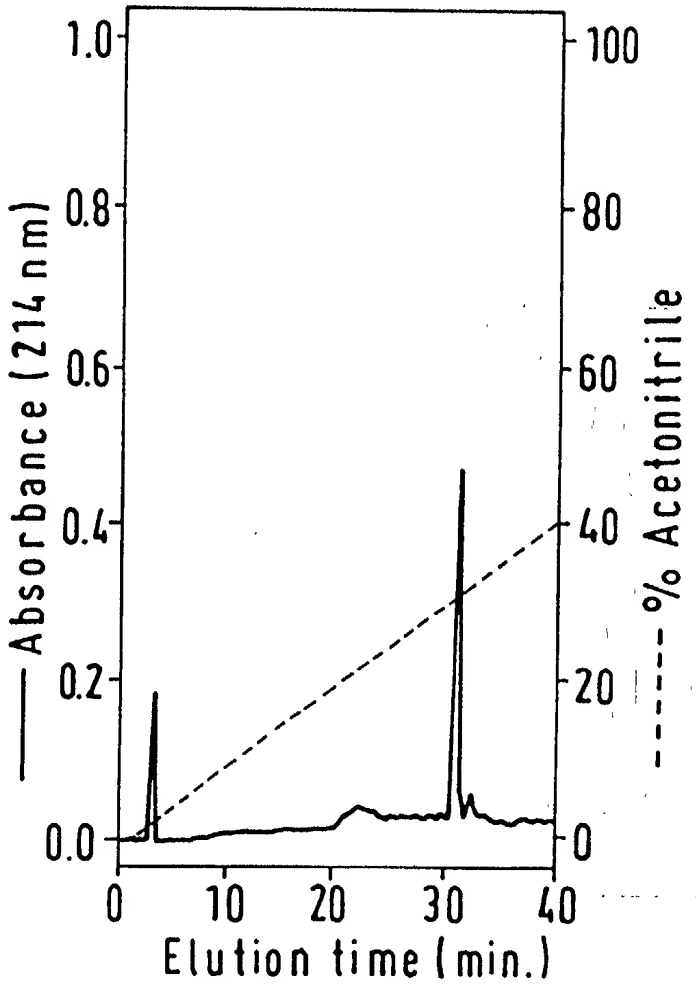


FIG. 5



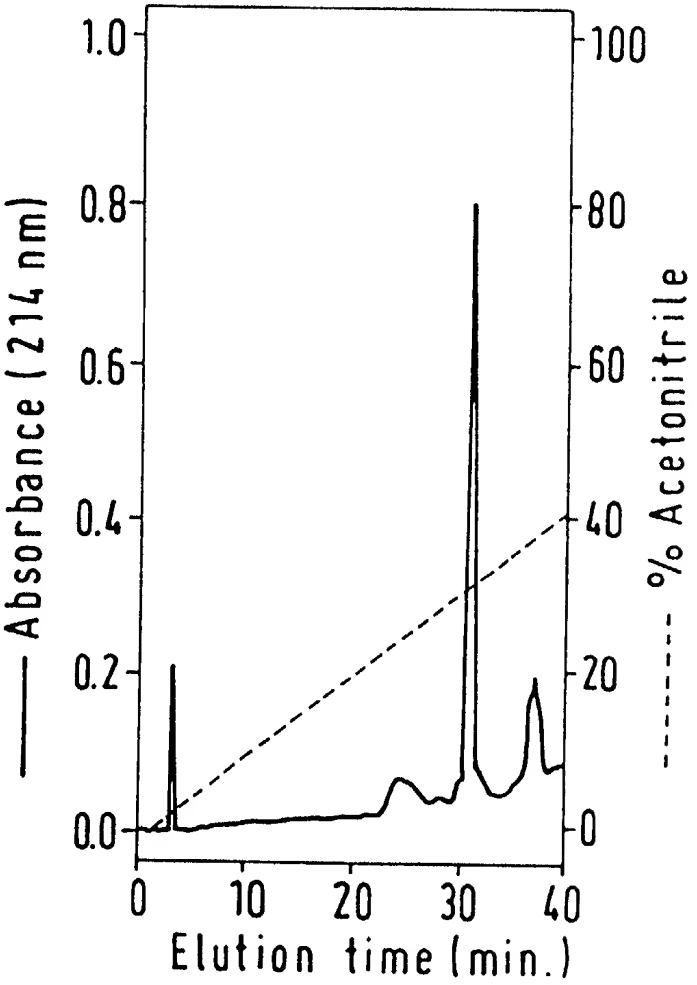


FIG. 6

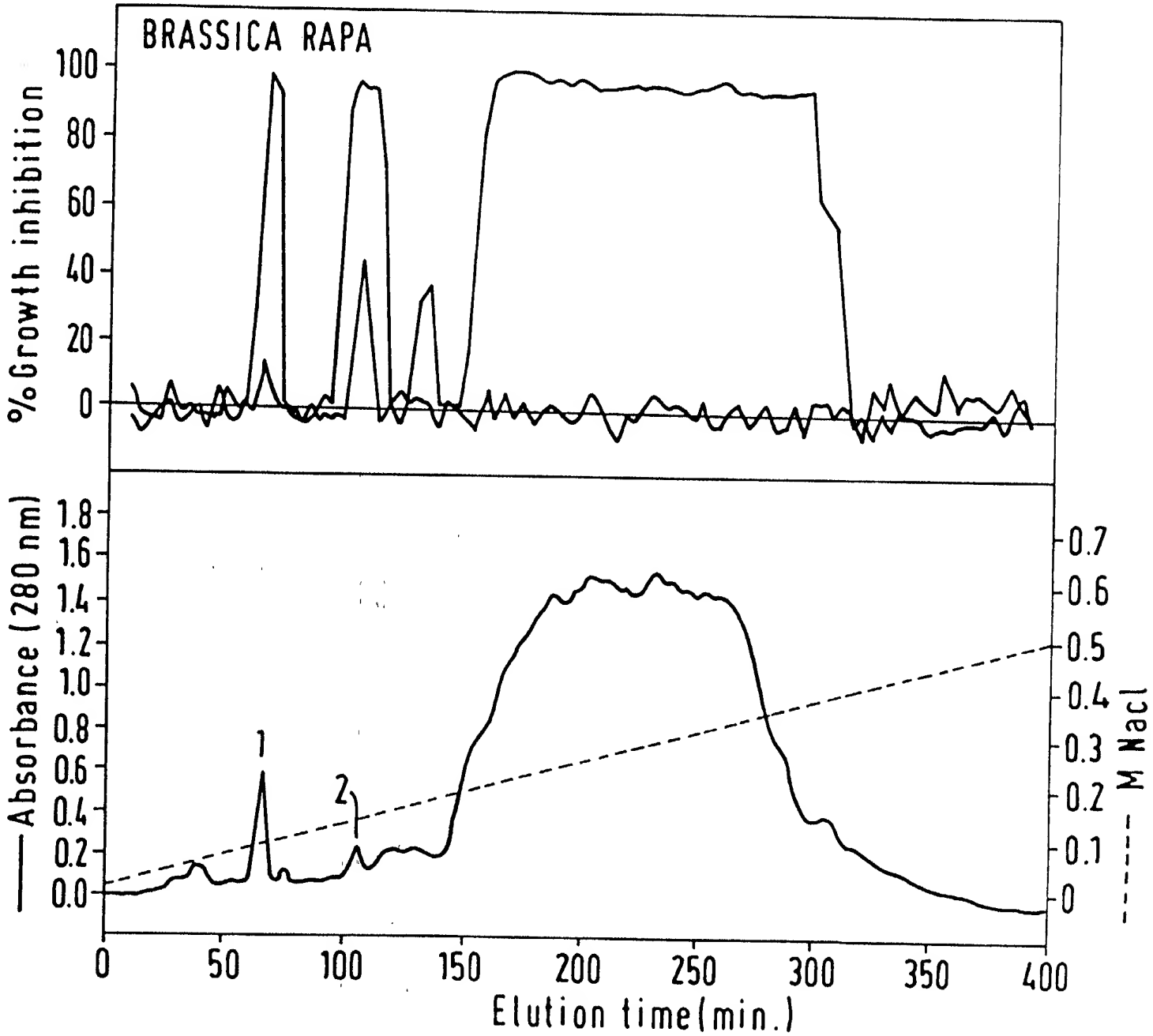


FIG. 7

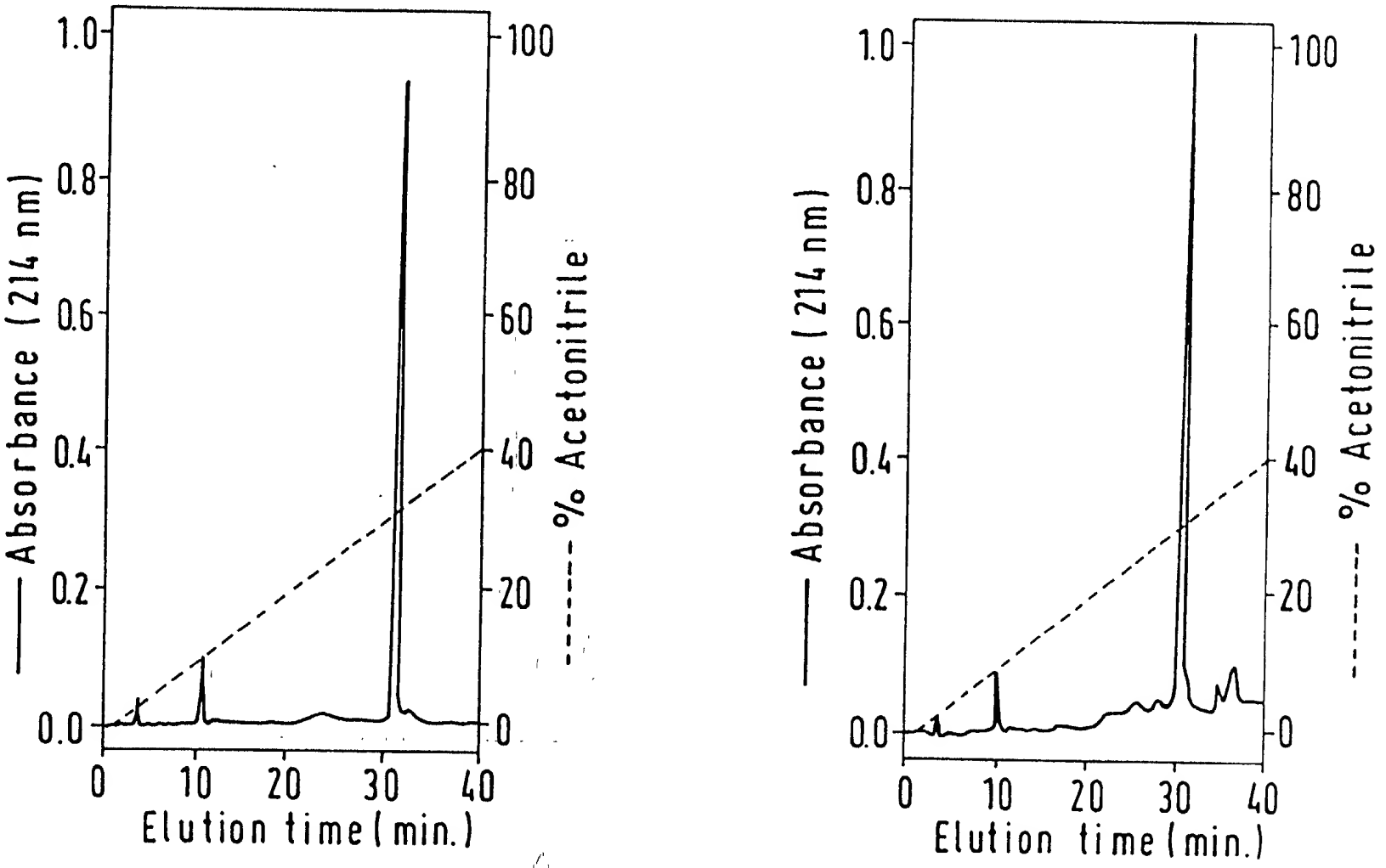


FIG.8

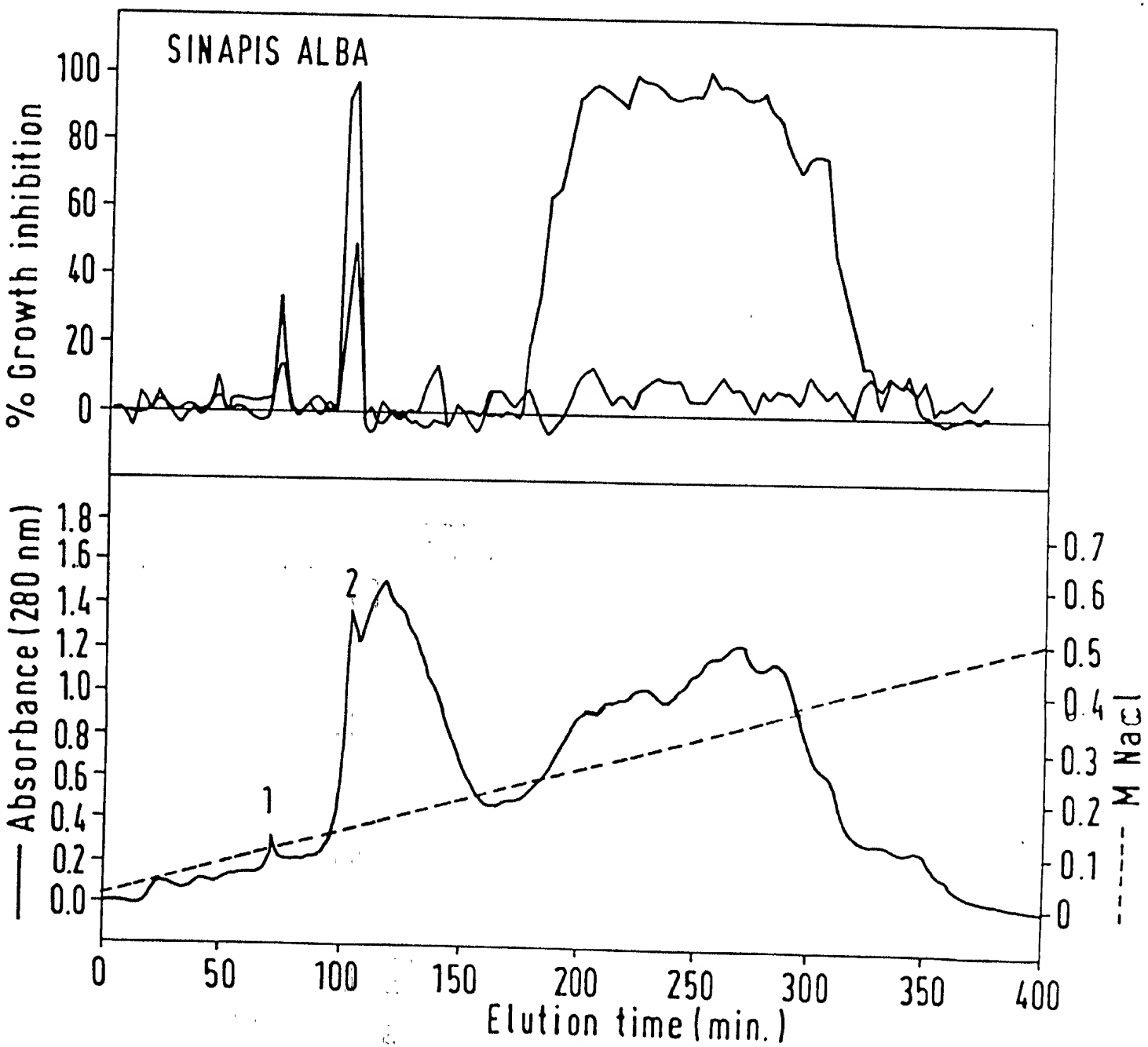


FIG. 9

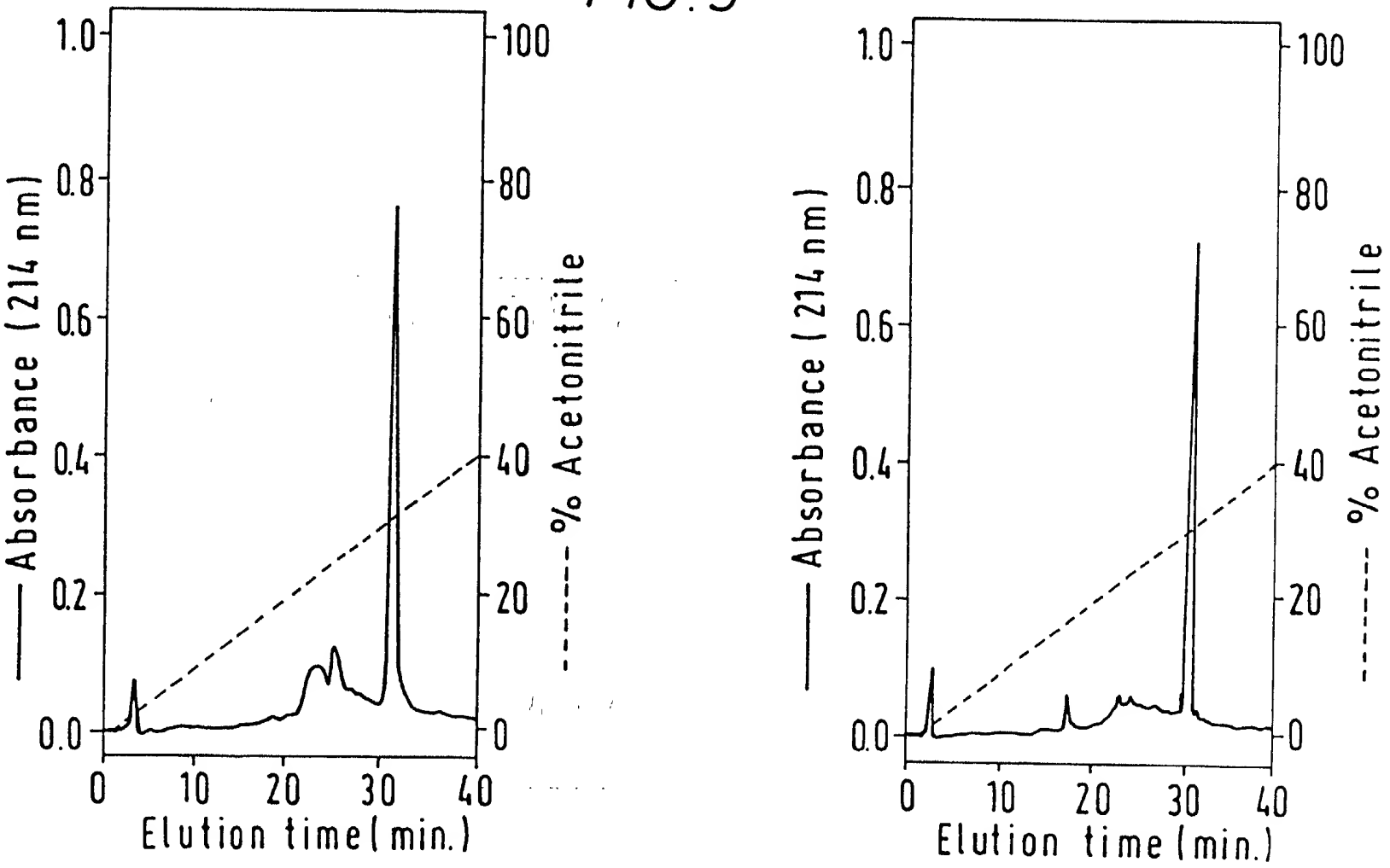


FIG.10

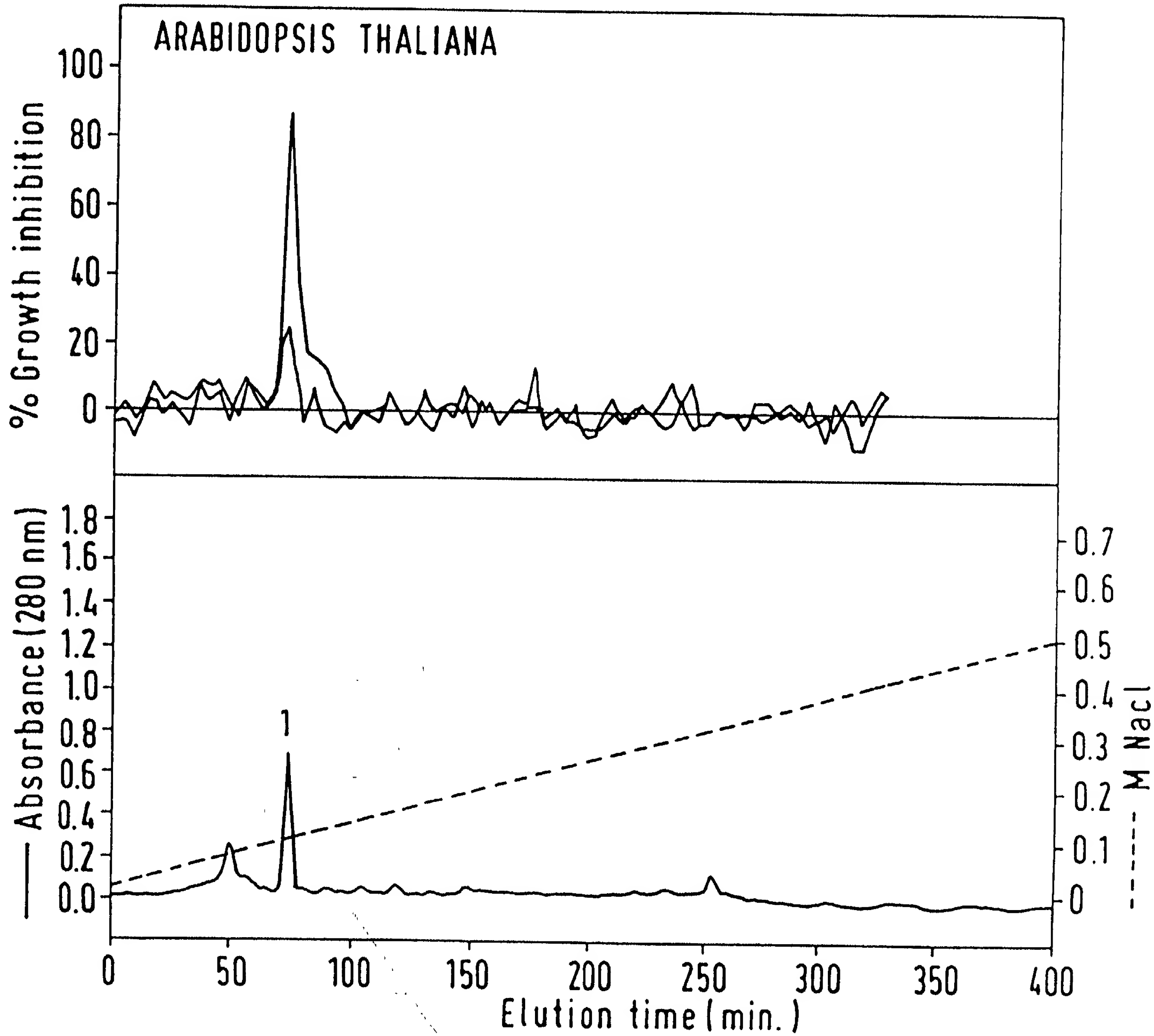

ARABIDOPSIS THALIANA
% Growth inhibition
100
80
60
40
20
0
Absorbance (280 nm)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1
M Nacl
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
250
300
350
400
Elution time (min.)

FIG .11

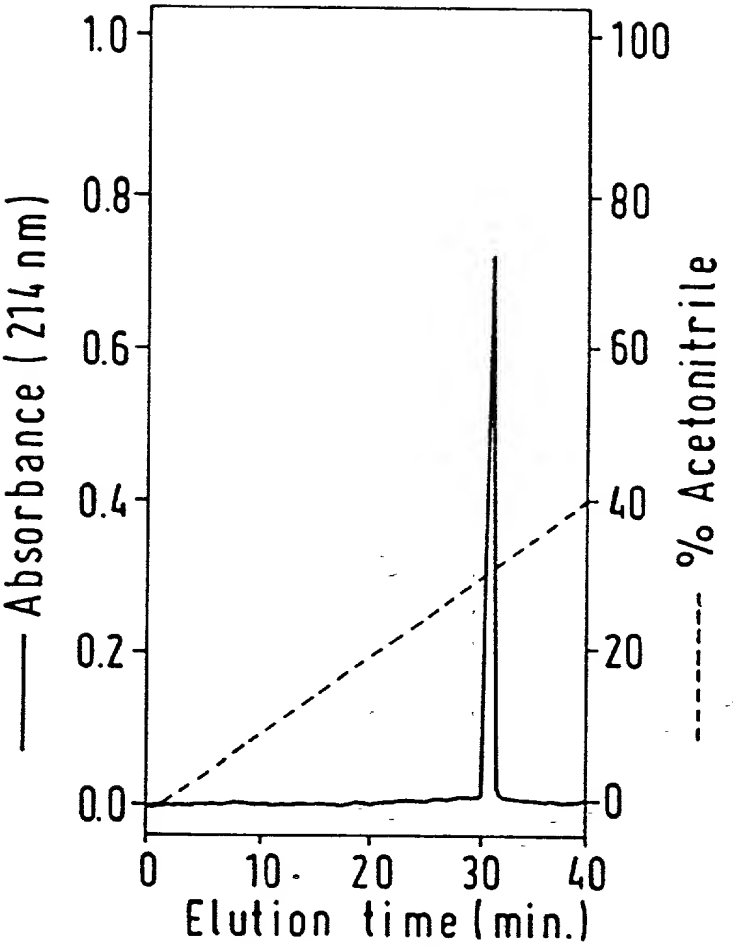
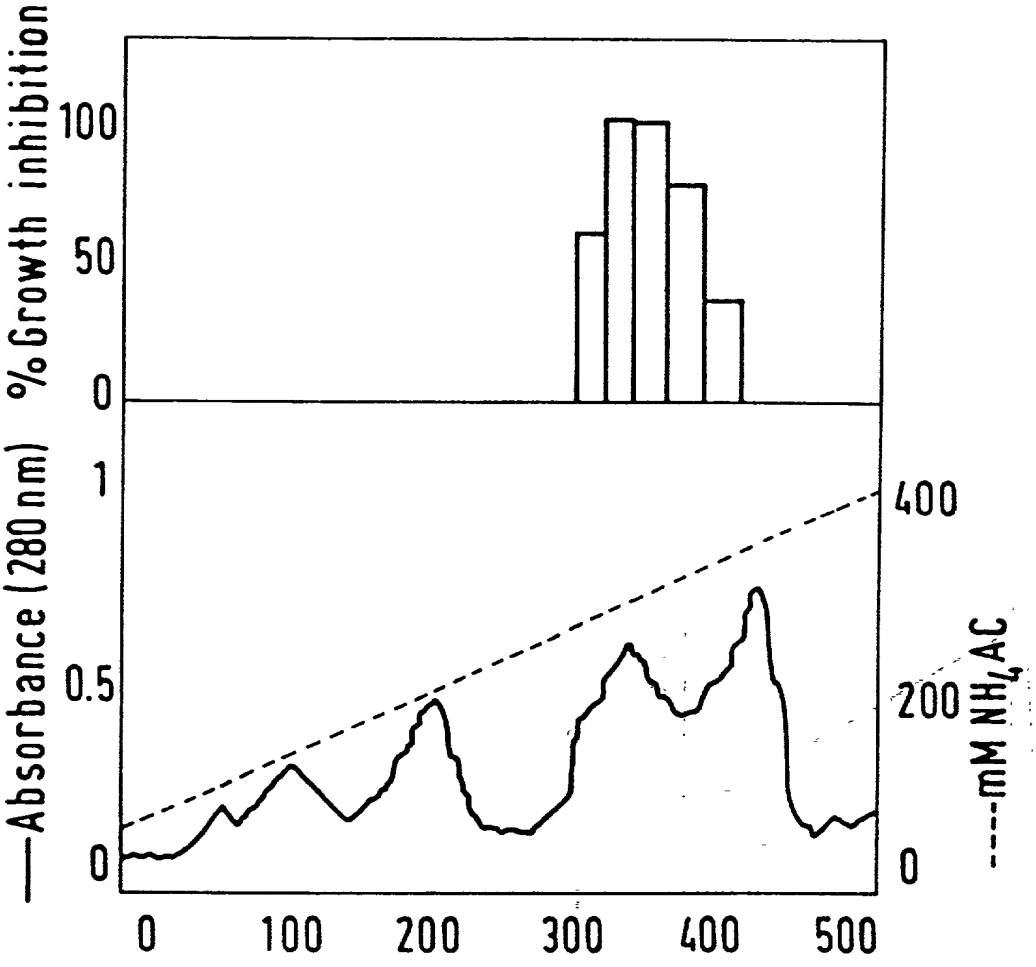

1.0
0.8
0.6
0.4
0.2
0.0
Absorbance (214 nm)
100
80
60
40
20
0
% Acetonitrile
0
10
20
30
40
Elution time (min.)

FIG. 12



IEC on S-Sepharose

FIG. 13

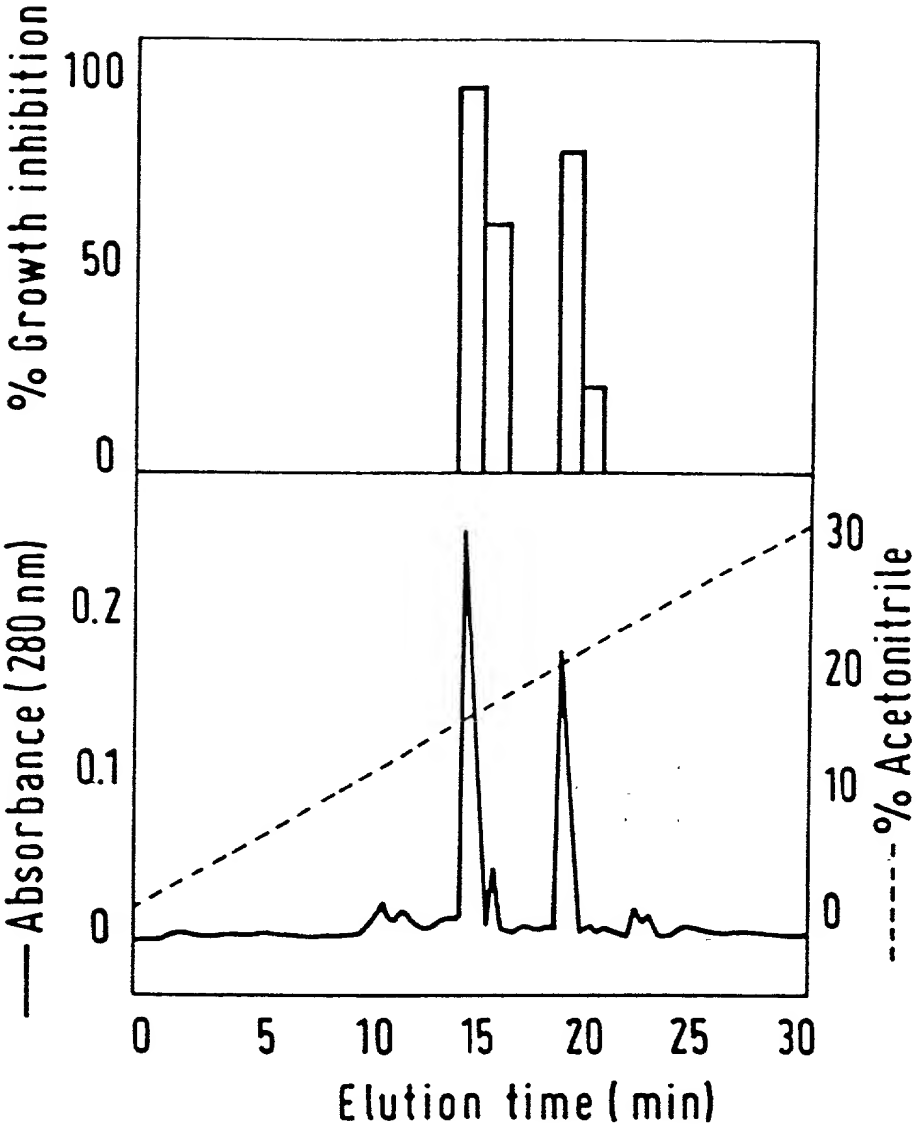
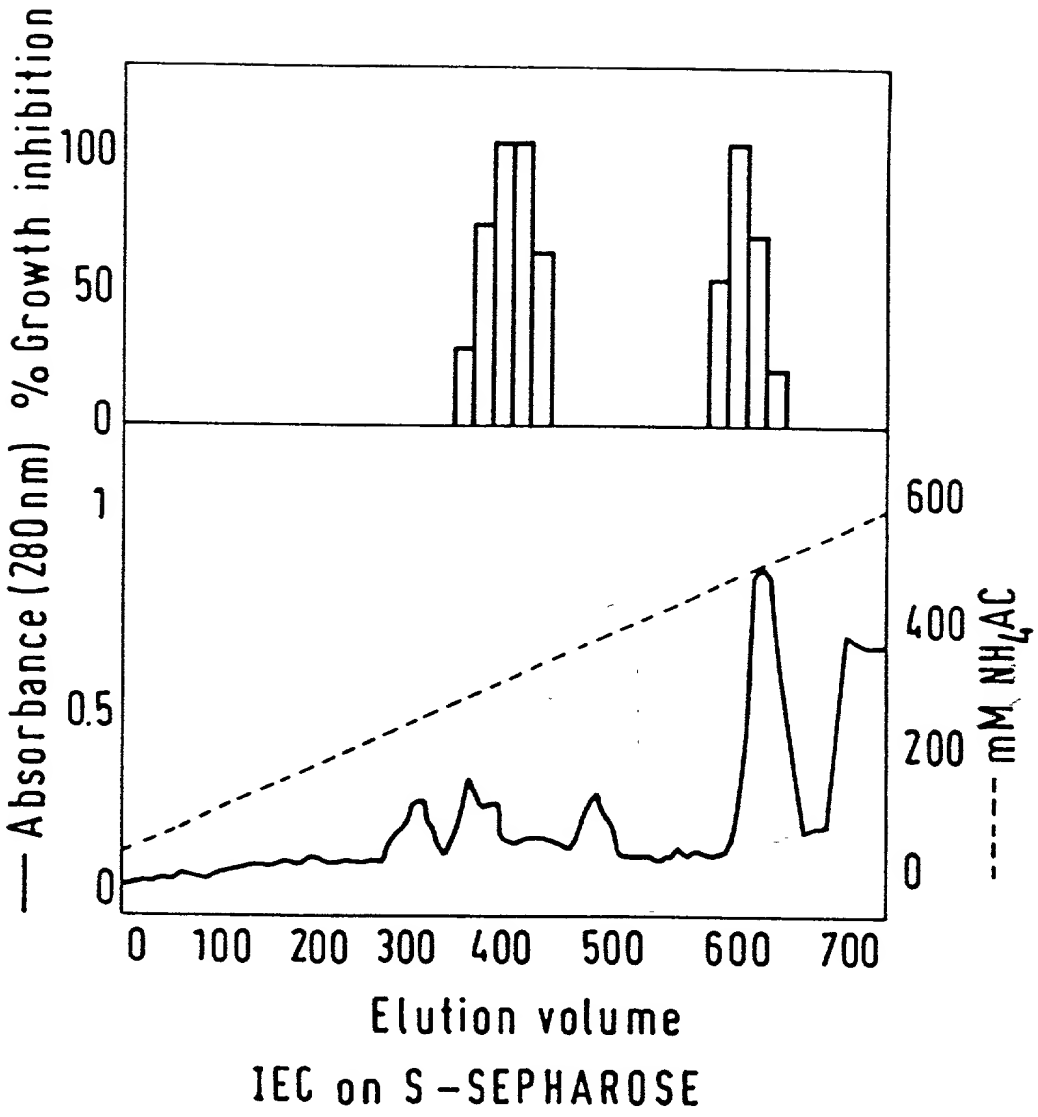

% Growth inhibition
100
50
0
Absorbance (280 nm)
0.2
0.1
0
30
20
10
0
% Acetonitrile
0
5
10
15
20
25
30
Elution time (min)

FIG. 14



IEC on S-SEPHAROSE

FIG. 15

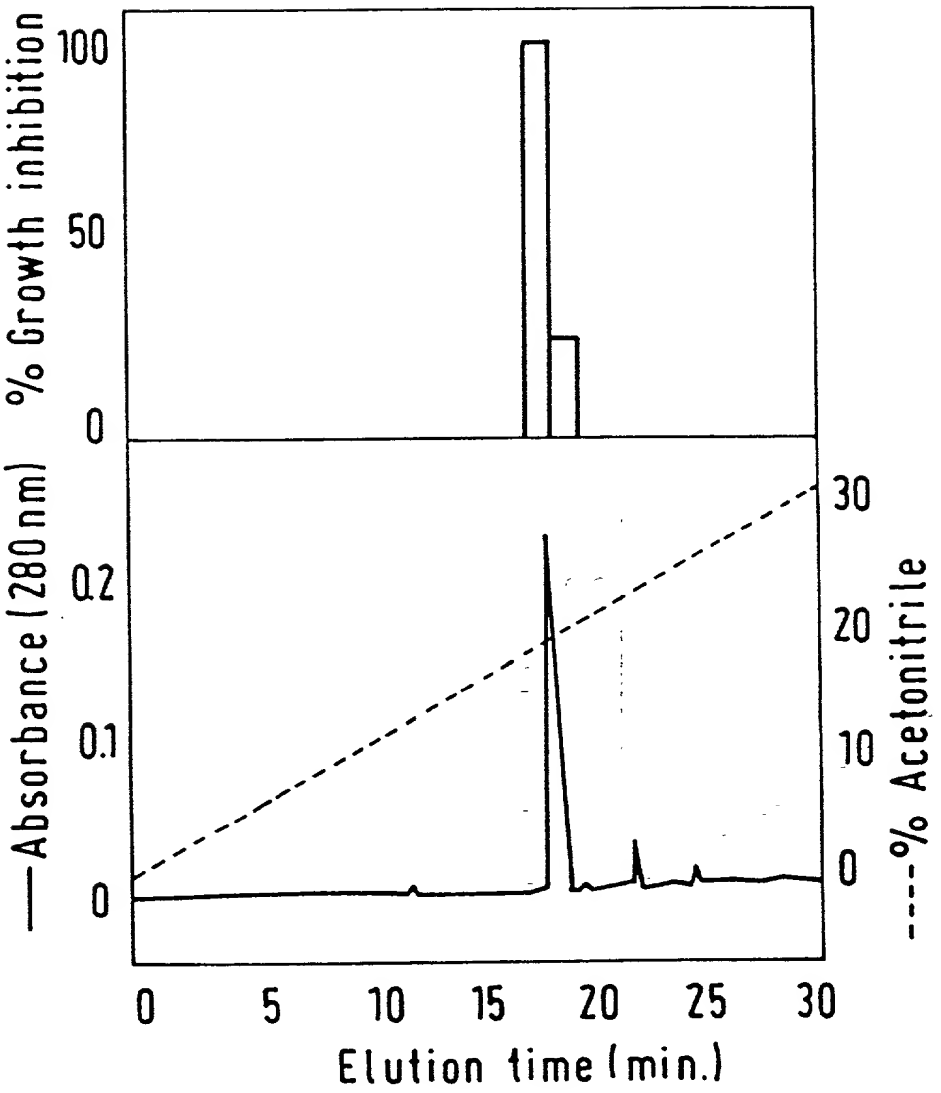

100
50
0
% Growth inhibition
0.2
0.1
0
—Absorbance (280 nm)
30
20
10
0
----% Acetonitrile
0
5
10
15
20
25
30
Elution time (min.)

FIG. 16

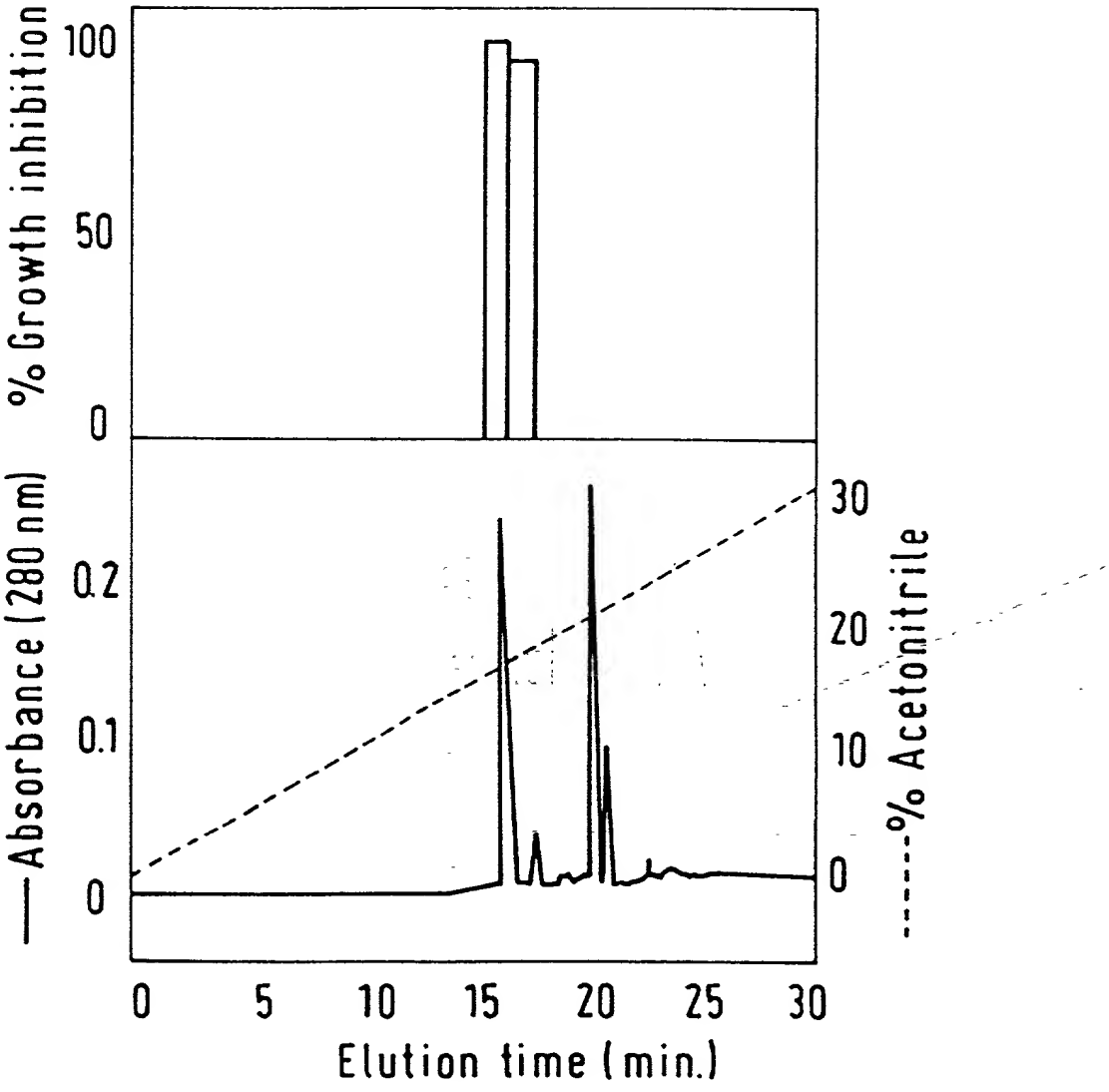
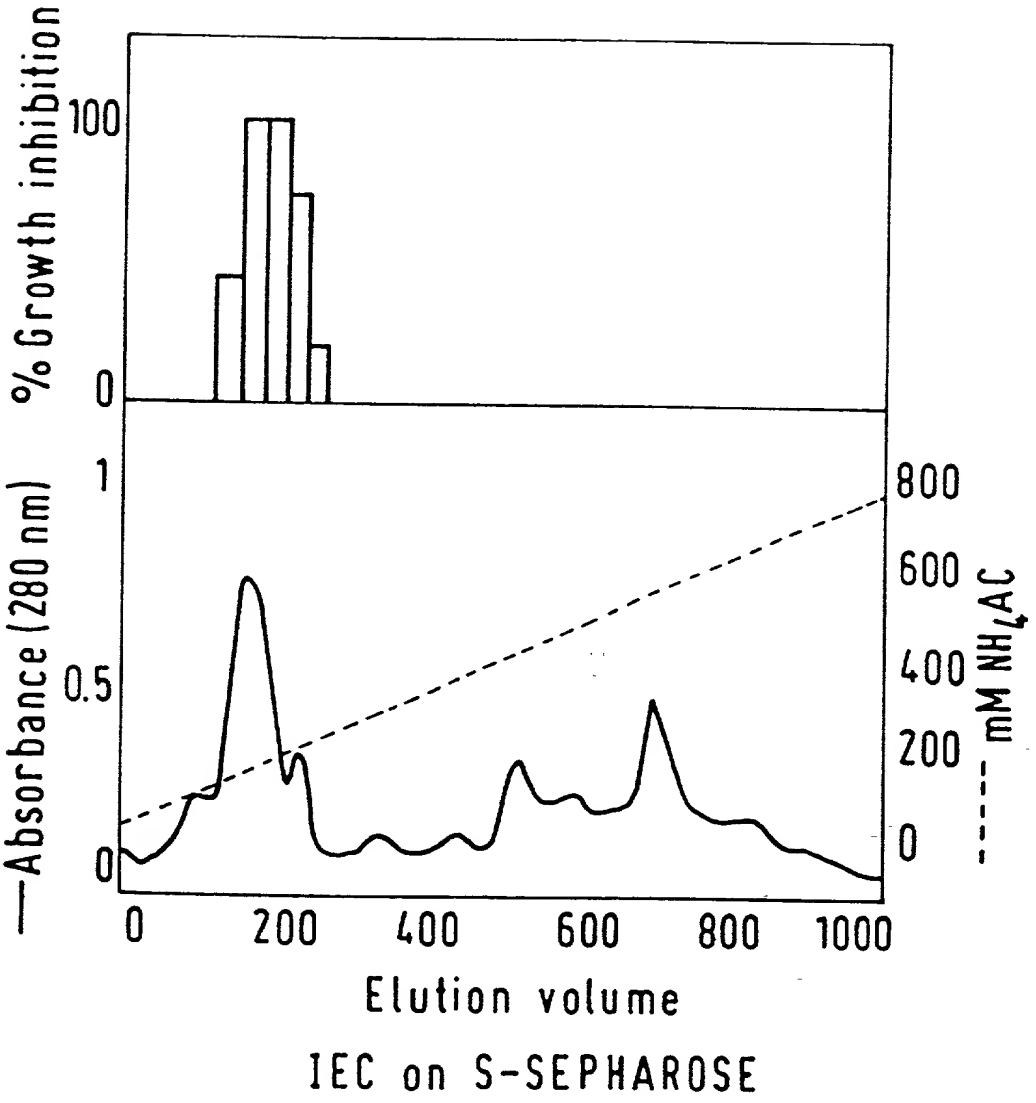

100
50
0
% Growth inhibition
0.2
0.1
0
—Absorbance (280 nm)
30
20
10
0
----% Acetonitrile
0
5
10
15
20
25
30
Elution time (min.)

FIG. 17



IEC on S-SEPHAROSE

FIG. 18

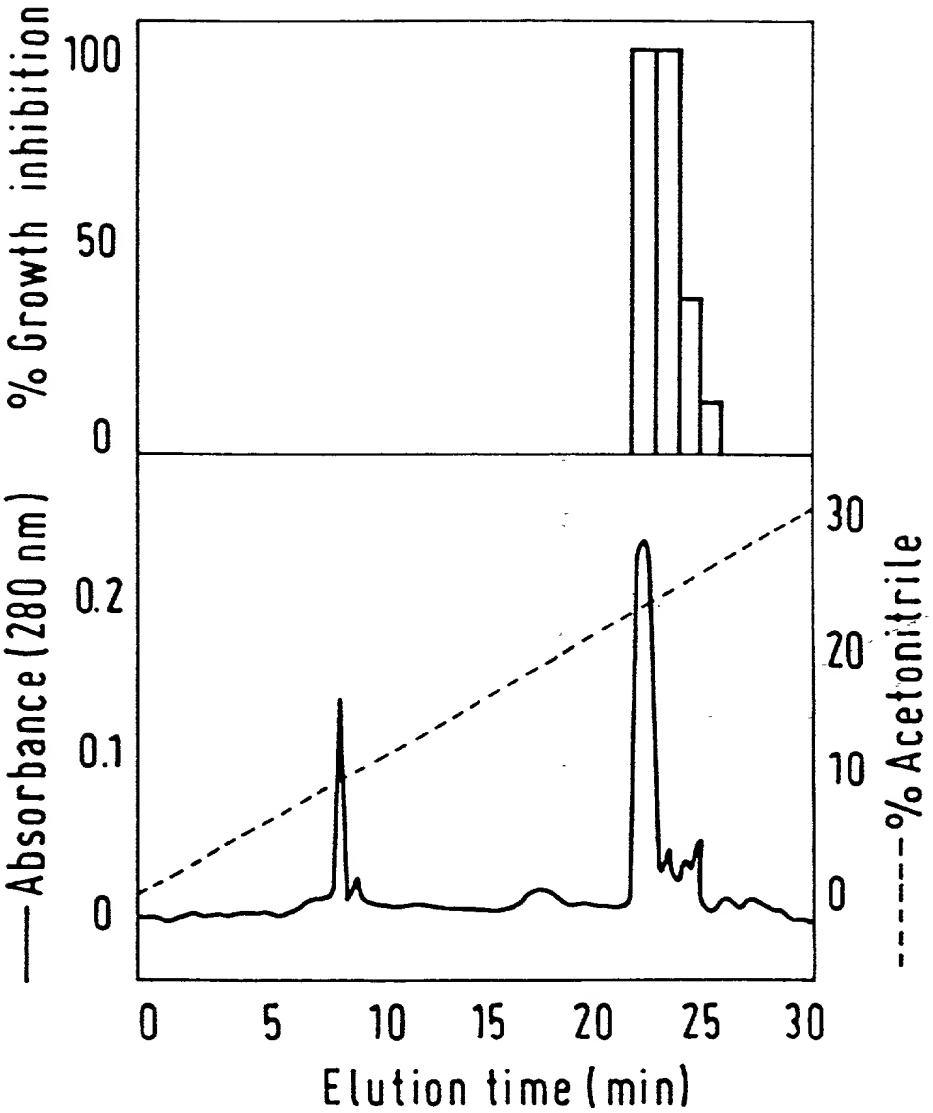

% Growth inhibition
100
50
0
—Absorbance (280 nm)
0.2
0.1
0
30
20
10
0
------% Acetonitrile
0
5
10
15
20
25
30
Elution time (min)

FIG. 19

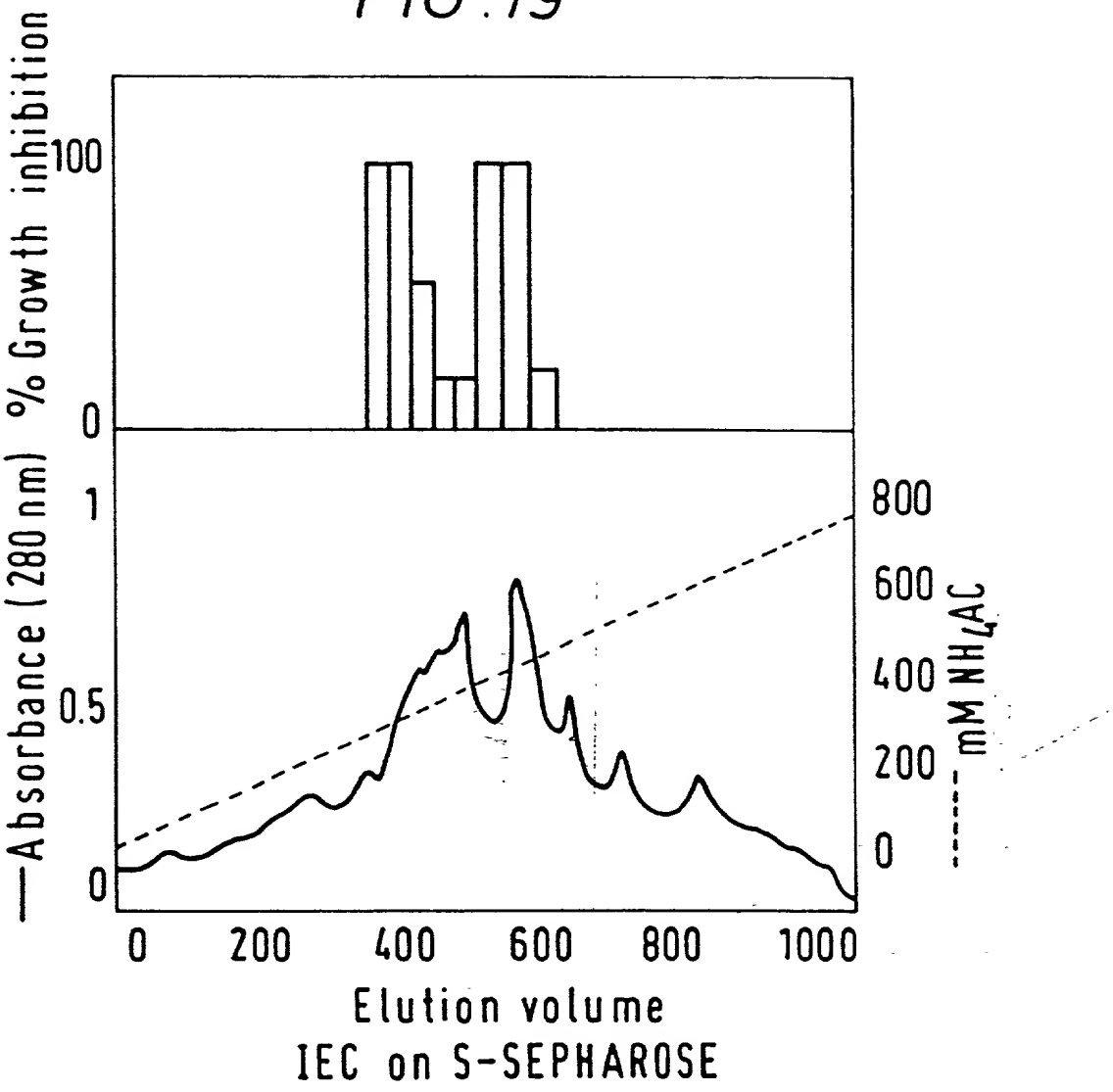

% Growth inhibition
100
0
1
0.5
0
—Absorbance (280 nm)
800
600
400
200
0
----- mM NH4AC
0
200
400
600
800
1000
Elution volume
IEC on S-SEPHAROSE

FIG. 20

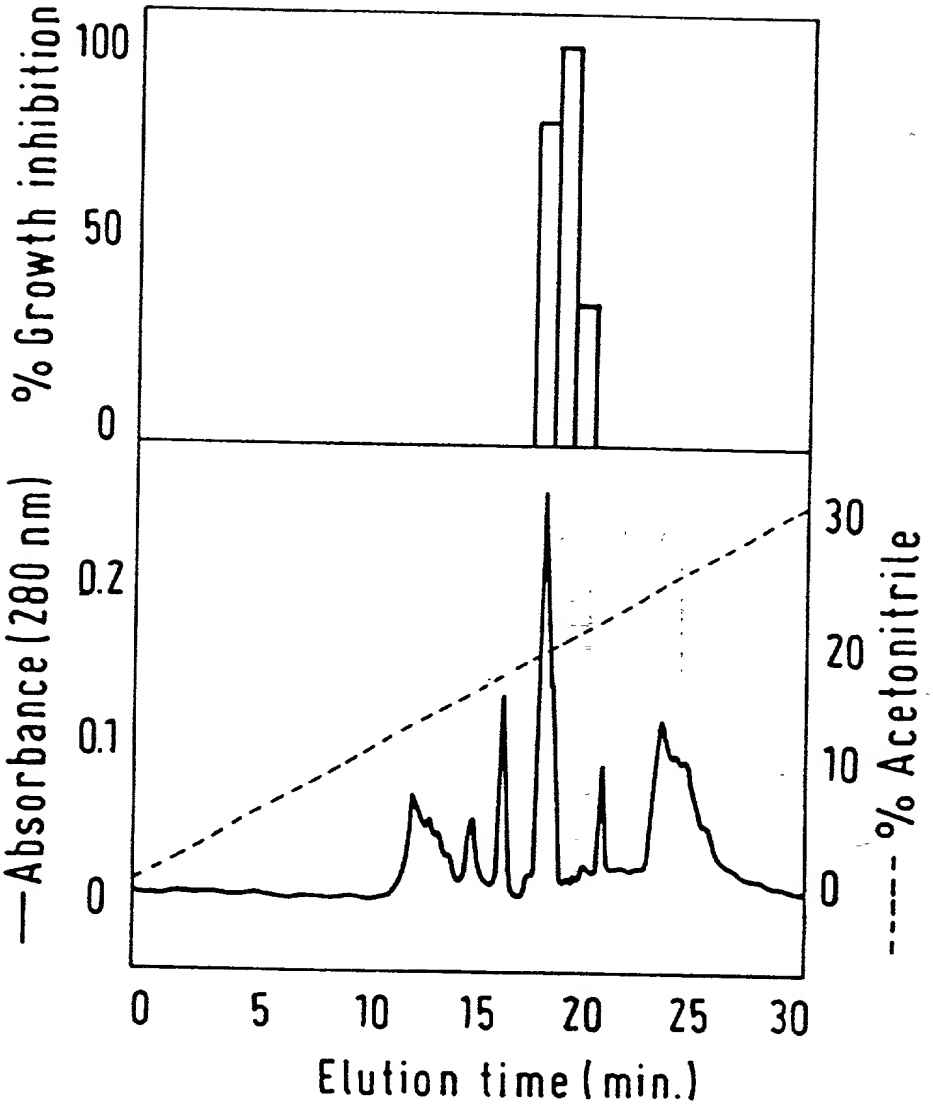

100
50
0
% Growth inhibition
0.2
0.1
0
—Absorbance (280 nm)
30
20
10
0
----- % Acetonitrile
0
5
10
15
20
25
30
Elution time (min.)

FIG. 21

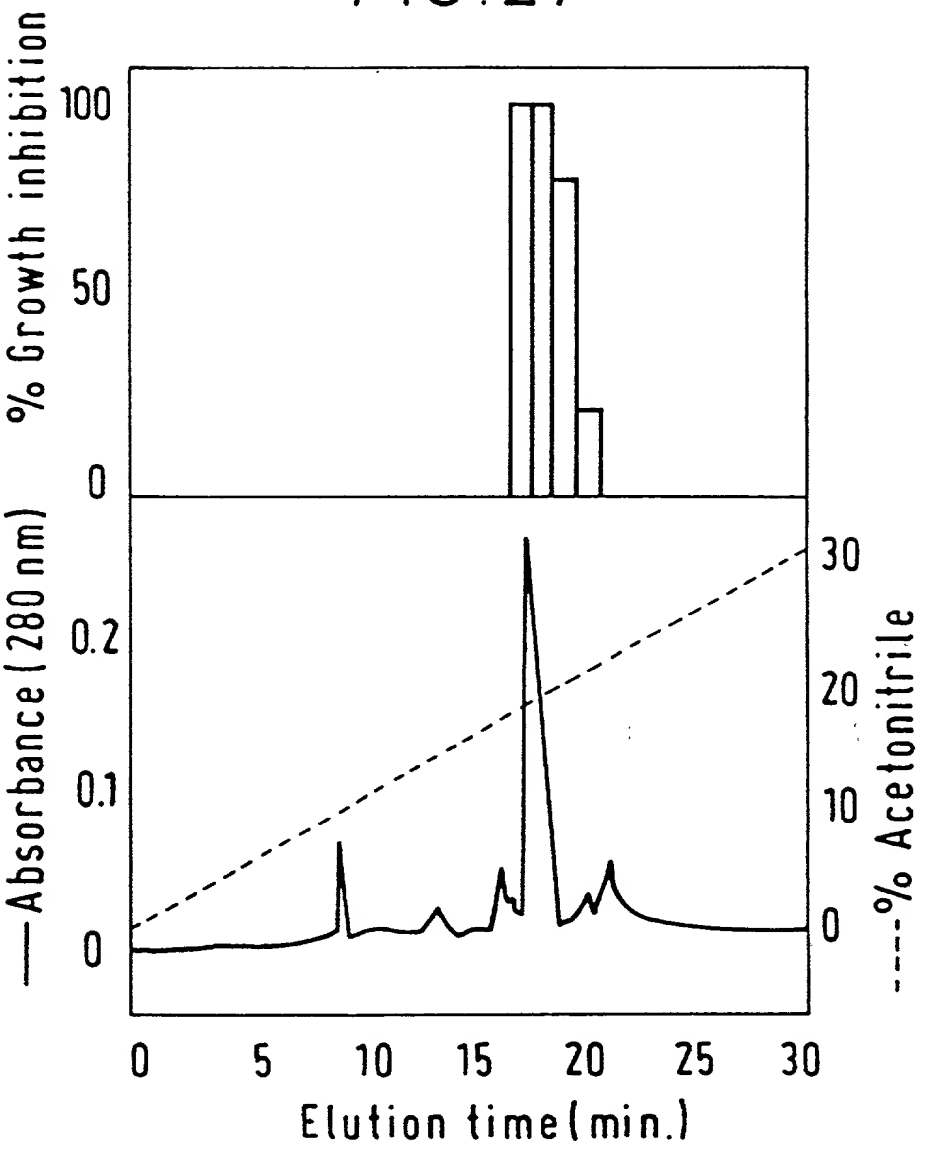

% Growth inhibition
100
50
0
—Absorbance (280 nm)
0.2
0.1
0
30
20
10
0
----% Acetonitrile
0
5
10
15
20
25
30
Elution time (min.)

FIG. 22

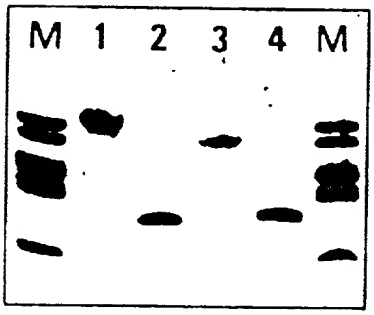


FIG. 23

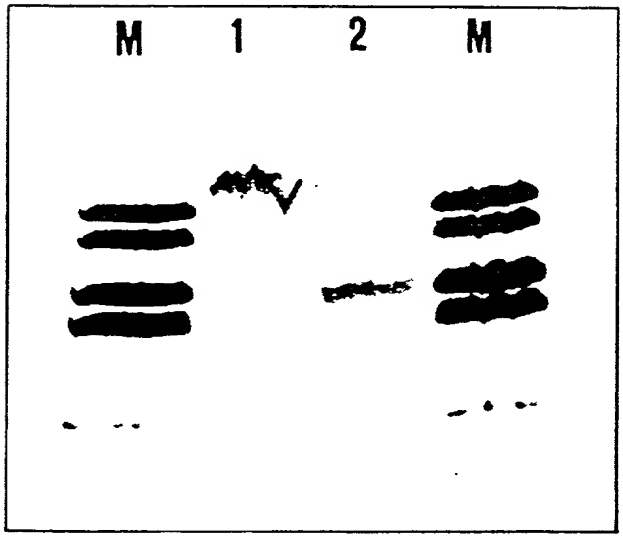


FIG. 24

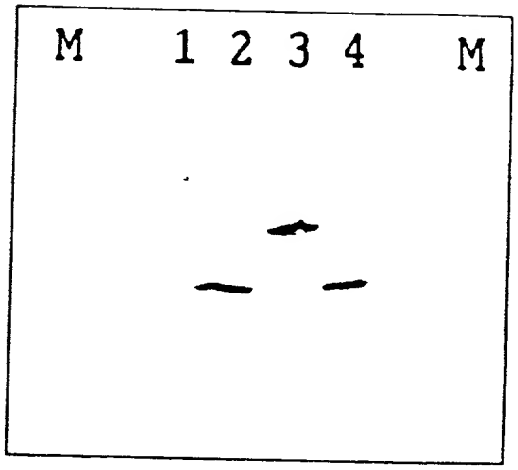


FIG. 25

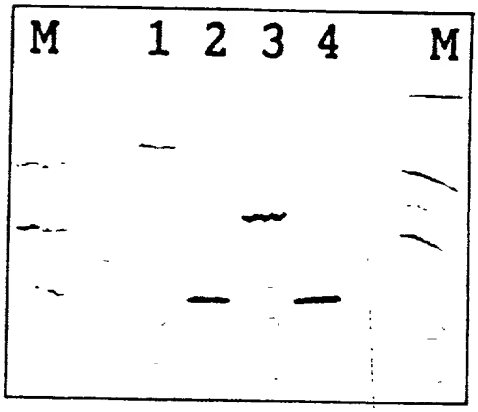


FIG. 26

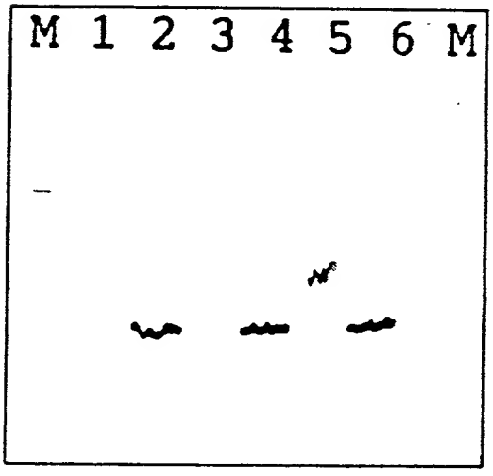


FIG. 27

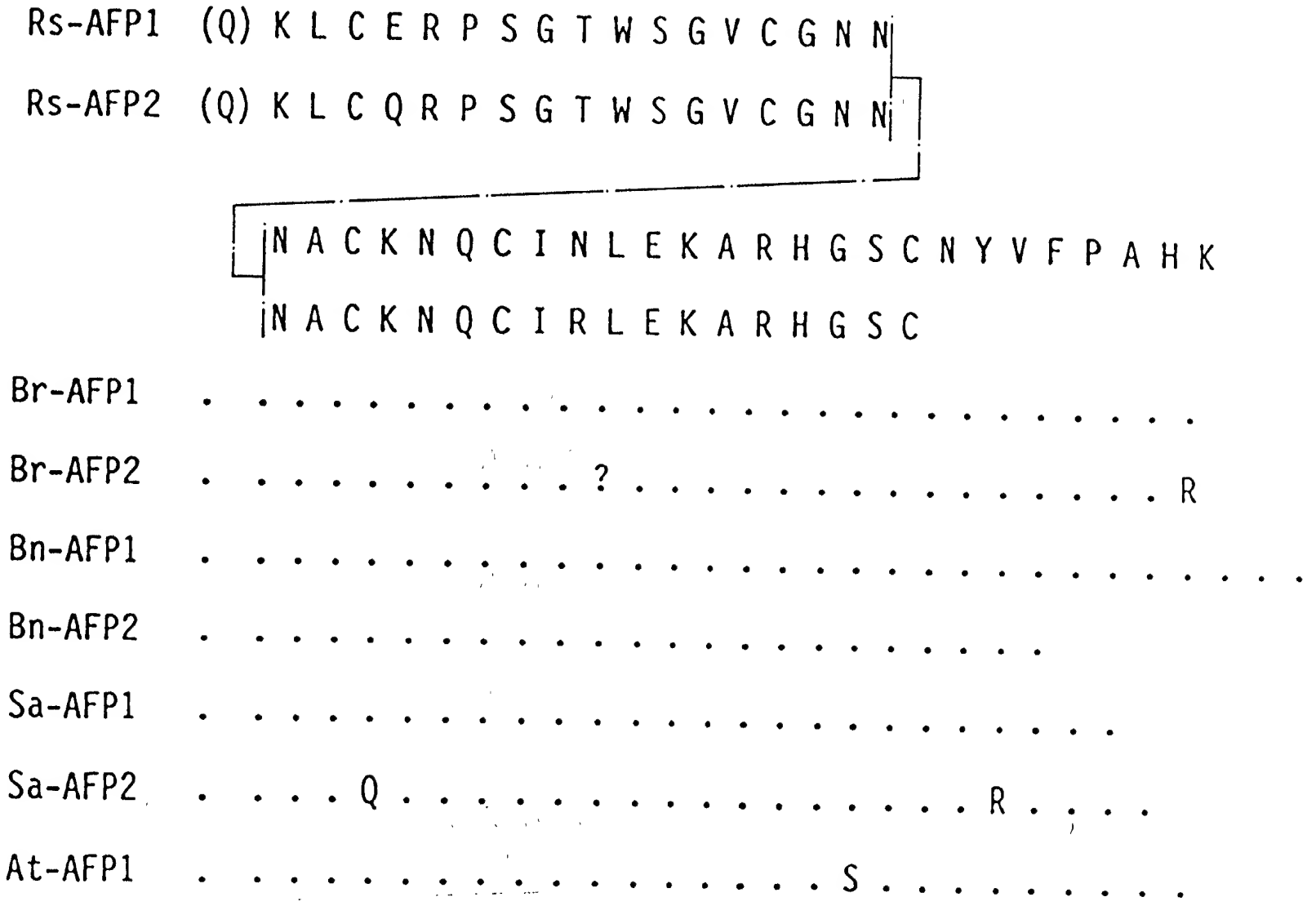


FIG. 28


Dm-AMP1 E L C E K A S K T W S G N C G N T G H C D N
Dm-AMP2 E V C E K A S K T W S G N C G N T G H C
Cb-AMP1 E L C E K A S K T W S G N C G N T K H C D D
Cb-AMP2 E L C E K A S K T W S G N C G N T K H C D N
Q C K S W E G A A H G A C H V R N G K H M C F C Y F N C
Q C K S W E G A A H G A C H V R N G K H M C F C Y F N C
K C K S W E G A A H G A C H V R S G K H M C F C Y F N C

FIG. 29

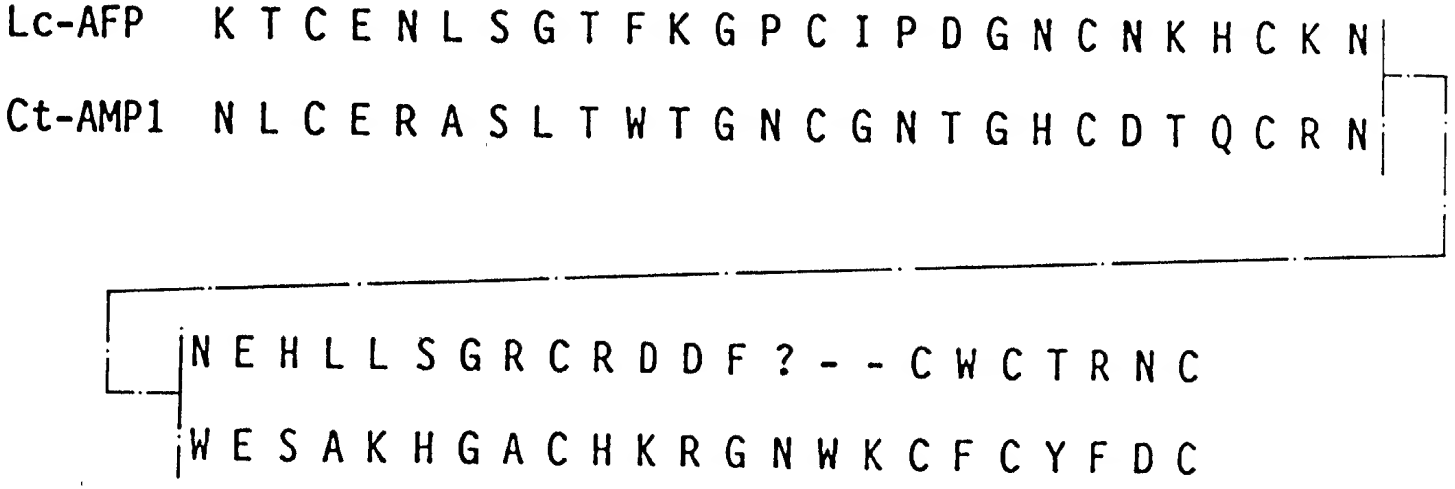

Lc-AFP K T C E N L S G T F K G P C I P D G N C N K H C K N
Ct-AMP1 N L C E R A S L T W T G N C G N T G H C D T Q C R N
N E H L L S G R C R D D F ? - - C W C T R N C
W E S A K H G A C H K R G N W K C F C Y F D C

FIG. 30 (1/3)

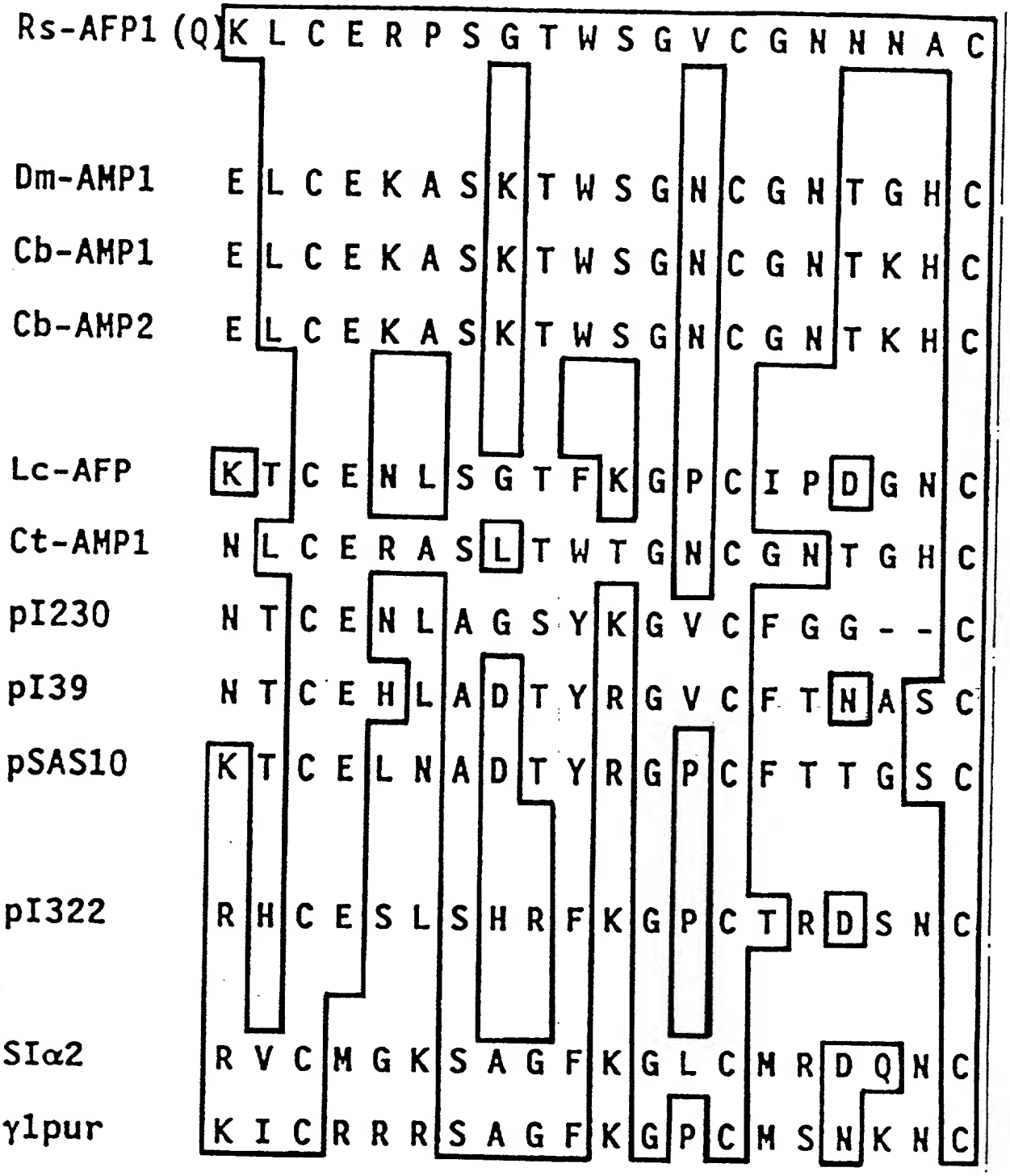

Rs-AFP1 (Q)KLCERPSGTWSGVCGNNNAC
Dm-AMP1 ELCEKASKTWSGNCGNTGHC
Cb-AMP1 ELCEKASKTWSGNCGNTKHC
Cb-AMP2 ELCEKASKTWSGNCGNTKHC
Lc-AFP KTCENLSGTFKGPCIPDGNC
Ct-AMP1 NLCERASLTWTGNCGNTGHC
pI230 NTCENLAGSYKGVCFGGG--C
pI39 NTCEHLADTYRGVCFTNASC
pSAS10 KTCELNADTYRGPCFTTGSC
pI322 RHCESLSHRFKGPCTRDSNC
SIα2 RVCMGKSAGFKGLCMRDQNC
γ1pur KICRRRSAGFKGPCMSNKNC

FIG. 30 (2/3)

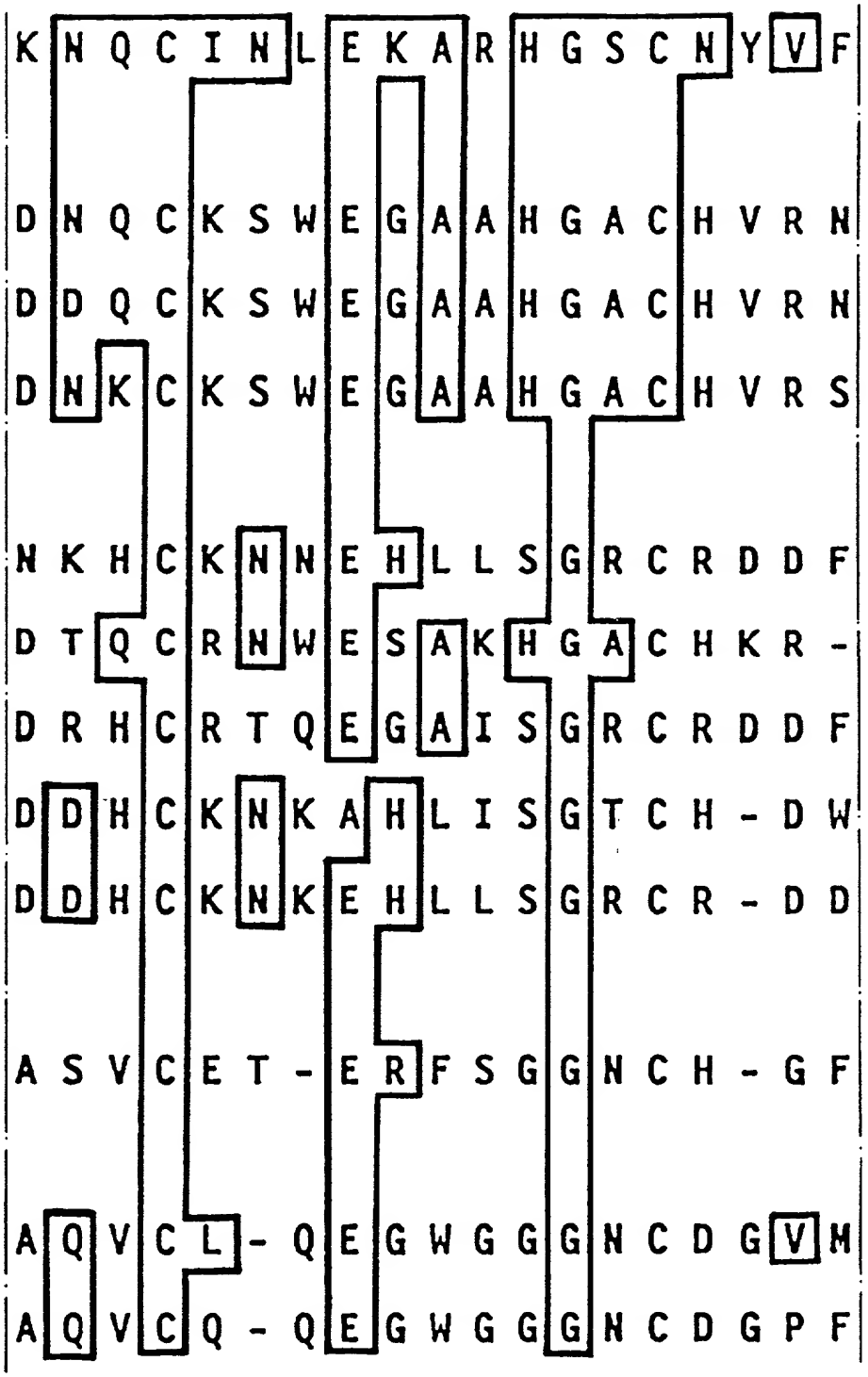

K N Q C I N L E K A R H G S C N Y V F
D N Q C K S W E G A A H G A C H V R N
D D Q C K S W E G A A H G A C H V R N
D N K C K S W E G A A H G A C H V R S
N K H C K N N E H L L S G R C R D D F
D T Q C R N W E S A K H G A C H K R -
D R H C R T Q E G A I S G R C R D D F
D D H C K N K A H L I S G T C H - D W
D D H C K N K E H L L S G R C R - D D
A S V C E T - E R F S G G N C H - G F
A Q V C L - Q E G W G G G N C D G V M
A Q V C Q - Q E G W G G G N C D G P F

FIG. 30 (3/3)

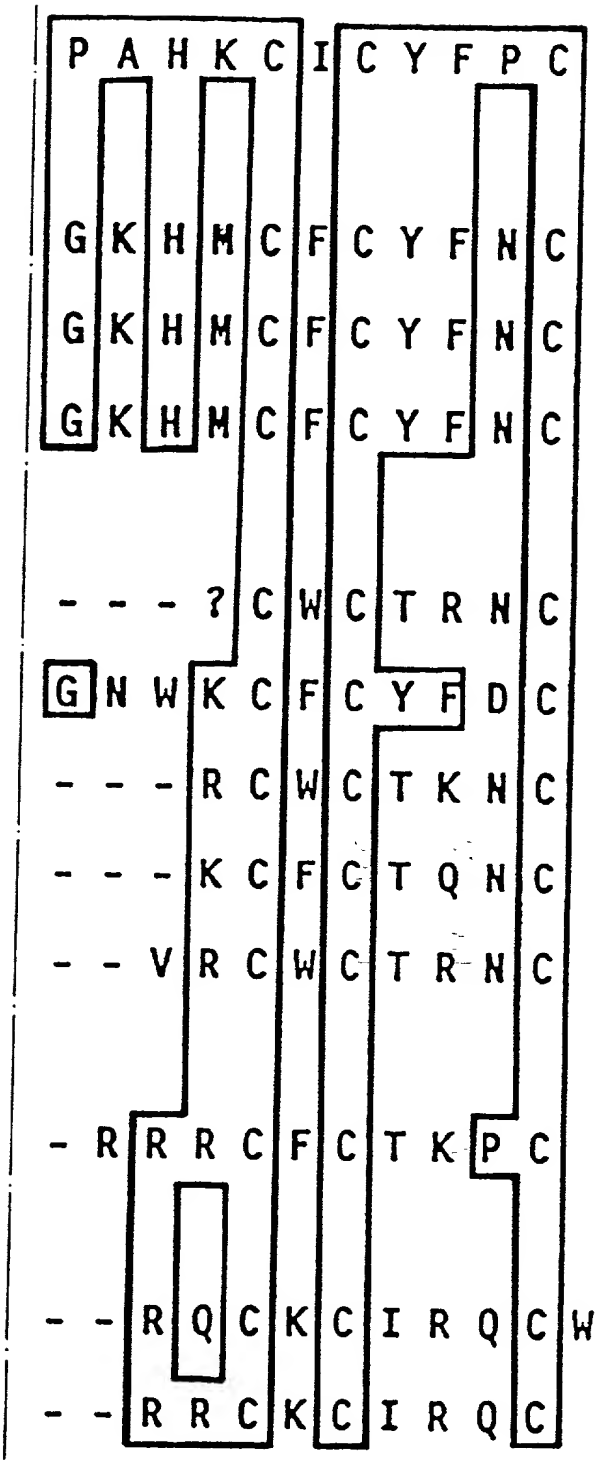

P A H K C I C Y F P C
G K H M C F C Y F N C
G K H M C F C Y F N C
G K H M C F C Y F N C
- - - ? C W C T R N C
G N W K C F C Y F D C
- - - R C W C T K N C
- - - K C F C T Q N C
- - V R C W C T R N C
- R R R C F C T K P C
- - R Q C K C I R Q C W
- - R R C K C I R Q C

FIG. 31A (1/2)

Dm-AMP1	GAG CTT TGC GAG AAG GCT TCT AAG ACT TGG TCT GGA AAC
	TGG GAG GGA GCT GCT CAT GGA GCT TGC CAT GTT AGA AAC
Dm-AMP2	GAG GTT TGC GAG AAG GCT TCT AAG ACT TGG TCT GGA AAC
Cb-AMP1	GAG CTT TGC GAG AAG GCT TCT AAG ACT TGG TCT GGA AAC
	TGG GAG GGA GCT GCT CAT GGA GCT TGC CAT GTT AGA AAC
Cb-AMP2	GAG CTT TGC GAG AAG GCT TCT AAG ACT TGG TCT GGA AAC
	TGG GAG GGA GCT GCT CAT GGA GCT TGC CAT GTT AGA TCT

FIG. 31A (2/2)

TGC GGA AAC ACT GGA CAT TGC GAT AAC CAA TGC AAG TCT

GGA AAG CAT ATG TGC TTC TGC TAC TTC AAC TGC

TGC GGA AAC ACT GGA CAT TGC ... ...

TGC GGA AAC ACT AAG CAT TGC GAT GAT CAA TGC AAG TCT

GGA AAG CAT ATG TGC TTC TGC TAC TTC AAC TGC

TGC GGA AAC ACT AAG CAT TGC GAT AAC AAG TGC AAG TCT

GGA AAG CAT ATG TGC TTC TGC TAC TTC AAC TGC

FIG. 31B

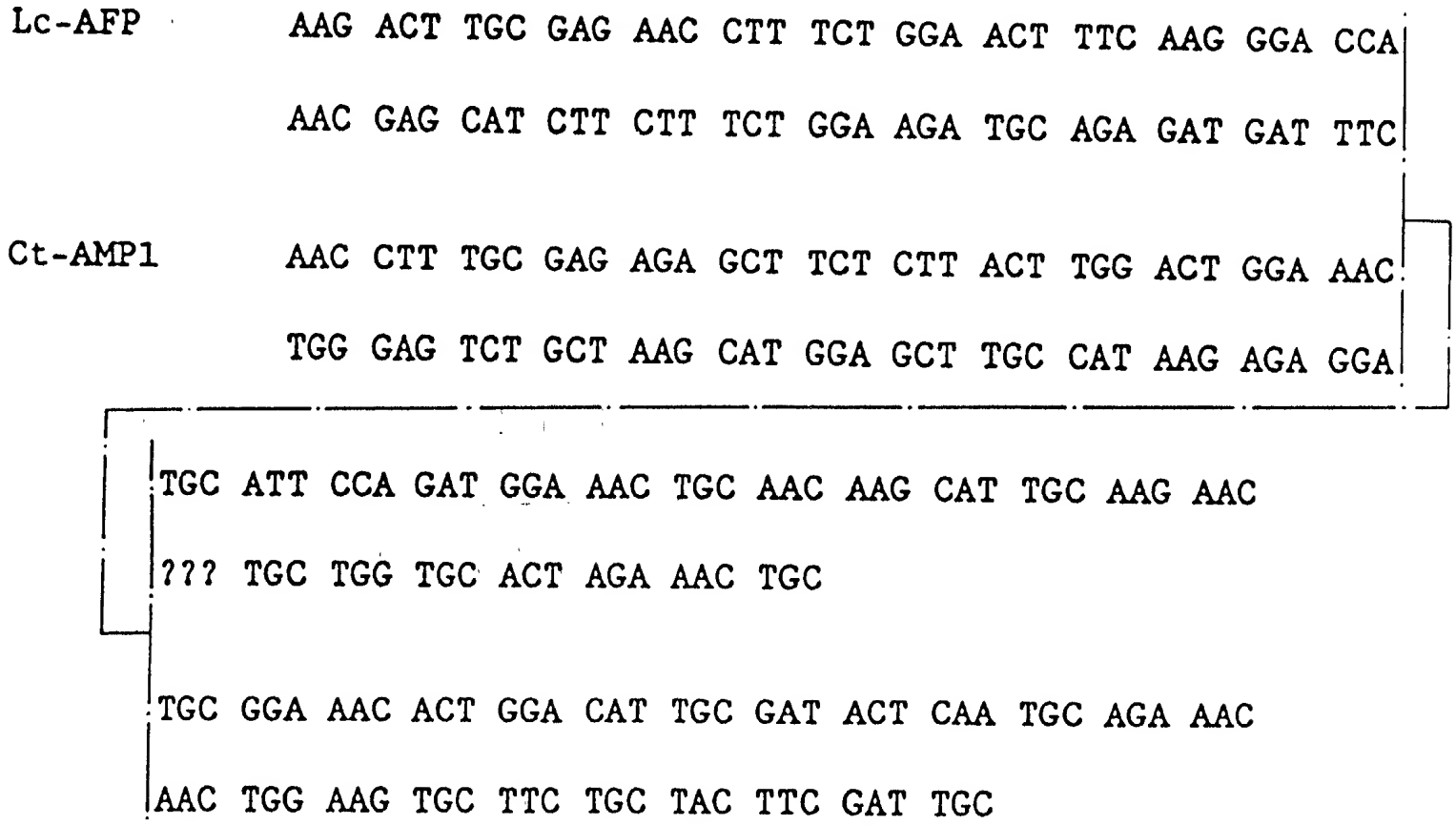

Lc-AFP
AAG ACT TGC GAG AAC CTT TCT GGA ACT TTC AAG GGA CCA
AAC GAG CAT CTT CTT TCT GGA AGA TGC AGA GAT GAT TTC
Ct-AMP1
AAC CTT TGC GAG AGA GCT TCT CTT ACT TGG ACT GGA AAC
TGG GAG TCT GCT AAG CAT GGA GCT TGC CAT AAG AGA GGA
TGC ATT CCA GAT GGA AAC TGC AAC AAG CAT TGC AAG AAC
??? TGC TGG TGC ACT AGA AAC TGC
TGC GGA AAC ACT GGA CAT TGC GAT ACT CAA TGC AGA AAC
AAC TGG AAG TGC TTC TGC TAC TTC GAT TGC

FIG. 32

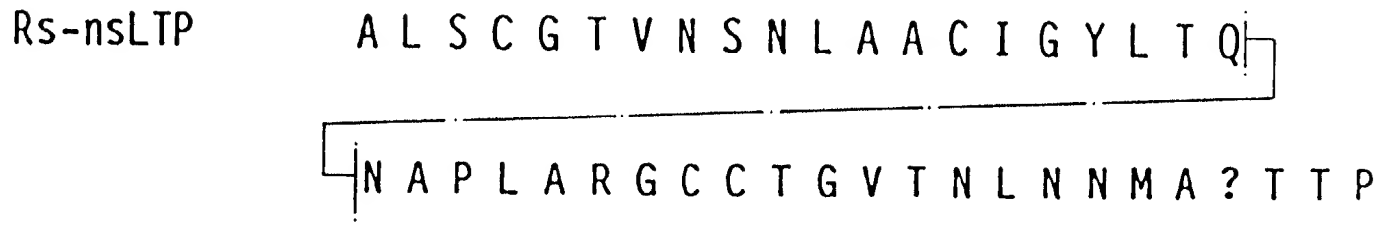


FIG. 33 (1/2)

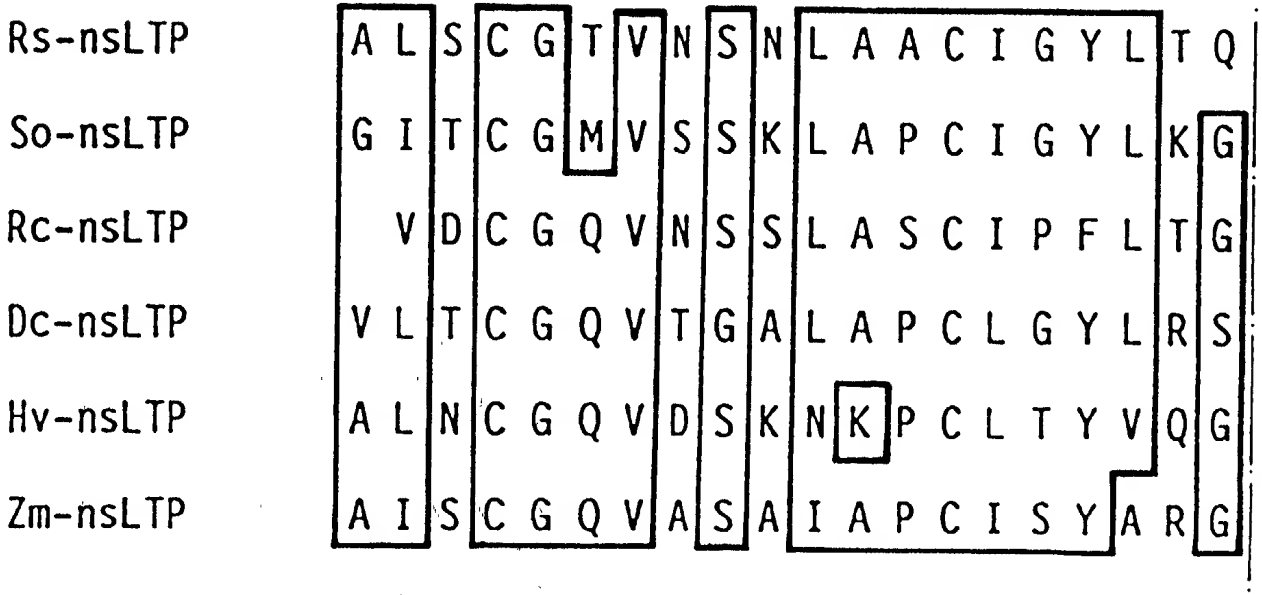


FIG. 33 (2/2)

```
N - A - - - P L A R G C C T G V T N L N N M A ? T T P
G - - - - - P L G G G S S G G I K A L N A A A A T T P . . .
G V A S - - P S A S - C C A G V Q N L K T L A P T S A . . .
Q V N V P V P L T - - C C N V V R G L N N A A R T T L . . .
G P G - G - P S G L - C C N G V R D L H N Q A Q S S G . . .
Q - G S G - P S A - G C C S G V R S L N N A A R T T A . . .
```

FIG. 34

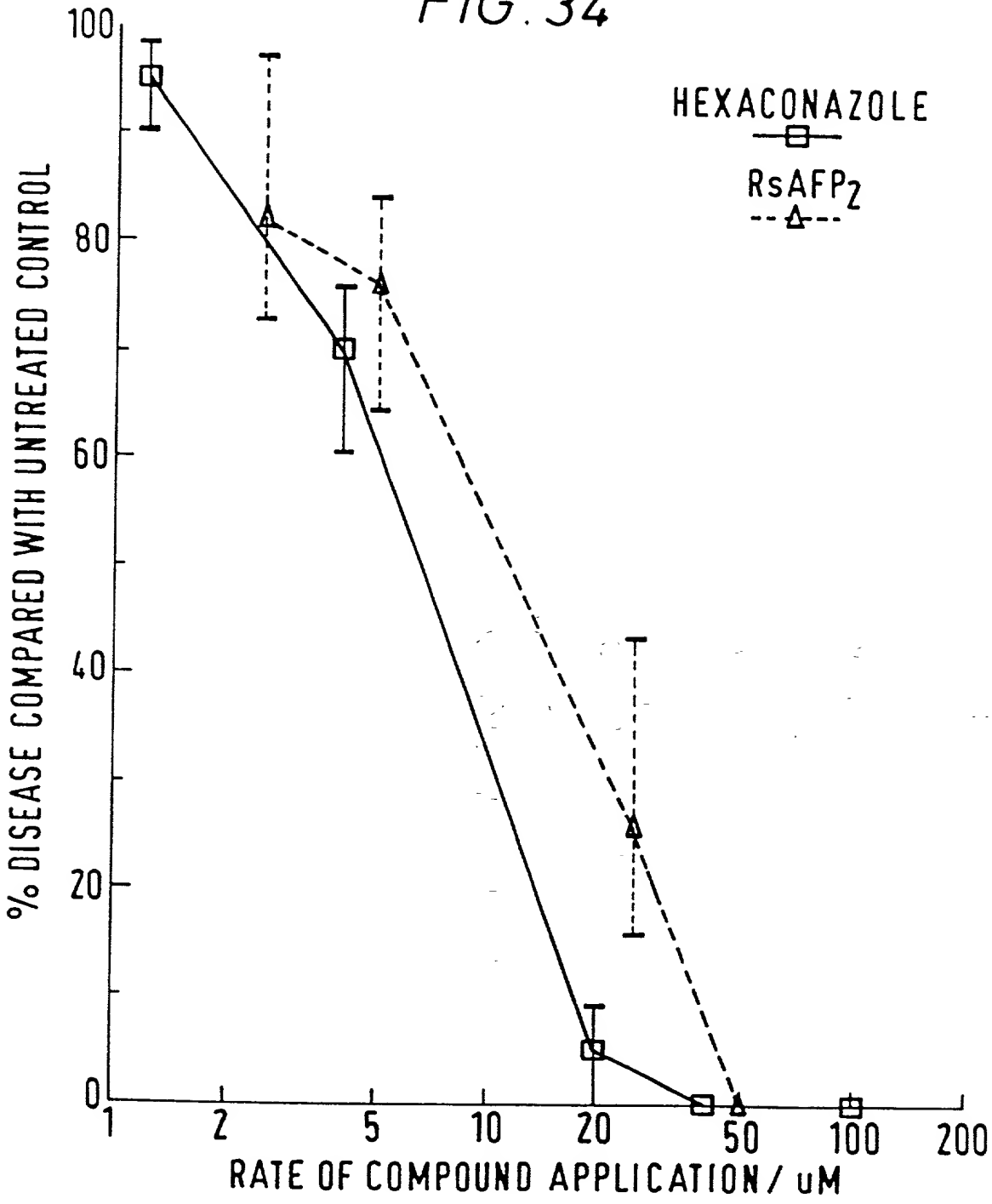

100
80
60
40
20
0
% DISEASE COMPARED WITH UNTREATED CONTROL
HEXACONAZOLE
RsAFP2
1
2
5
10
20
50
100
200
RATE OF COMPOUND APPLICATION / uM

FIG.35

```
GTTTTATTAGTGATCATGGCTAAGTTTGCGTCCATCATCGCACTT      45
                M  A  K  F  A  S  I  I  A  L

CTTTTTGCTGCTCTTGTTCTTTTTGCTGCTTTCGAAGCACCAACA      90
L  F  A  A  L  V  L  F  A  A  F  E  A  E  T

ATGGTGGAAGCACAGAAGTTGTGCGAAAGGCCAAGTGGGACATGG     135
M  V  E  A  Q  K  L  C  E  R  P  S  G  T  W

TCAGGAGTCTGTGGAAACAATAACGCATGCAAGAATCAGTGCATT     180
S  G  V  C  G  N  N  N  A  C  K  N  Q  C  I

AACCTTGAGAAAGCACGACATGGATCTTGCAACTATGTCTTCCCA     225
N  L  E  K  A  R  H  G  S  C  N  Y  V  F  P

GCTCACAAGTGTATCTGCTACTTTCCTTGTIAATTTATCGCAAAC     270
A  H  K  C  I  C  Y  F  P  C  *

TCTTTGGTGAATAGTTTTTATGTAATTTACACAAAATAAGTCAGT     315

GTCACTATCCATGAGTGATTTTAAGACATGTACCAGATATGTTAT     360

GTTGGTTCGGTTATACAAATAAAGTTTTATTCACCAAAAAAAAAA     405

AAAAAAAAA                                         414
```

FIG. 37 (1/2)

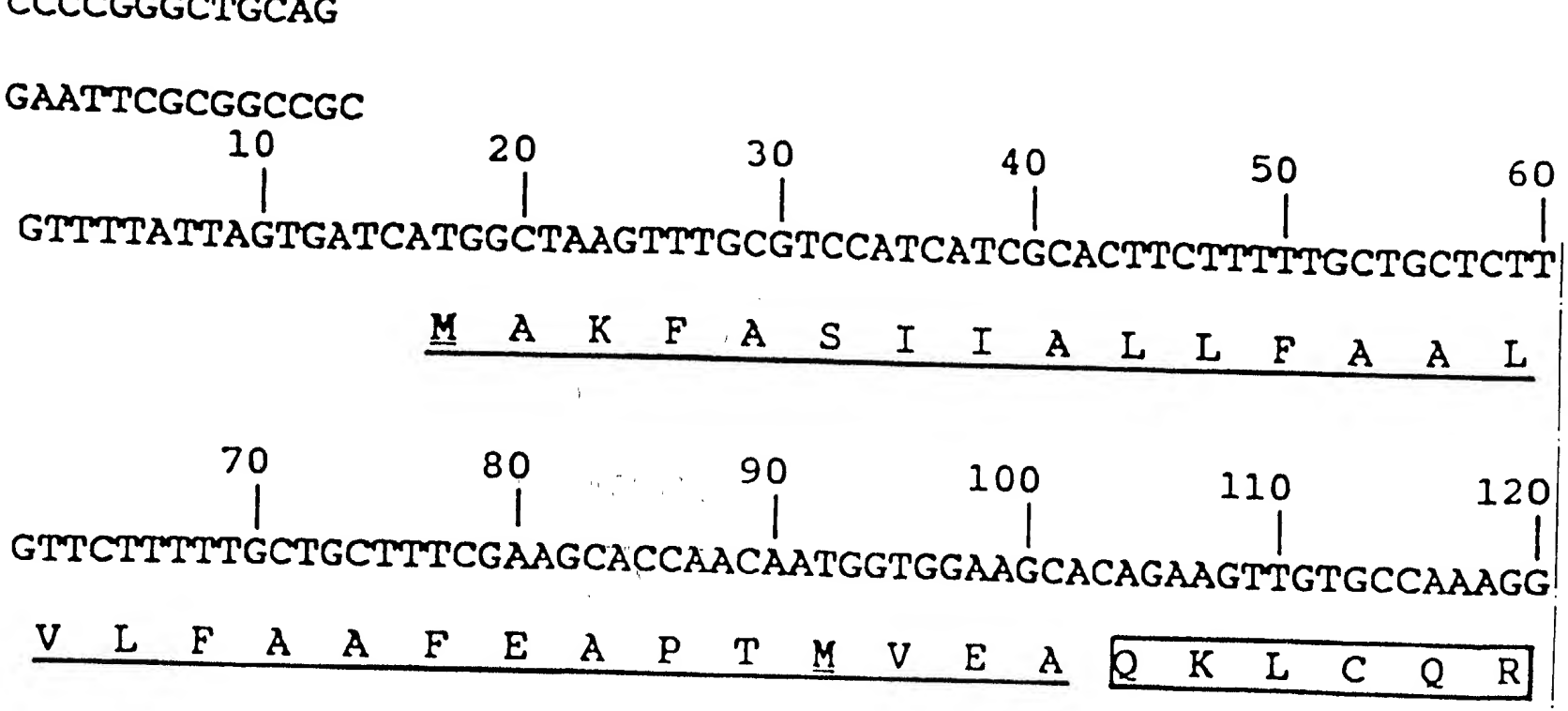
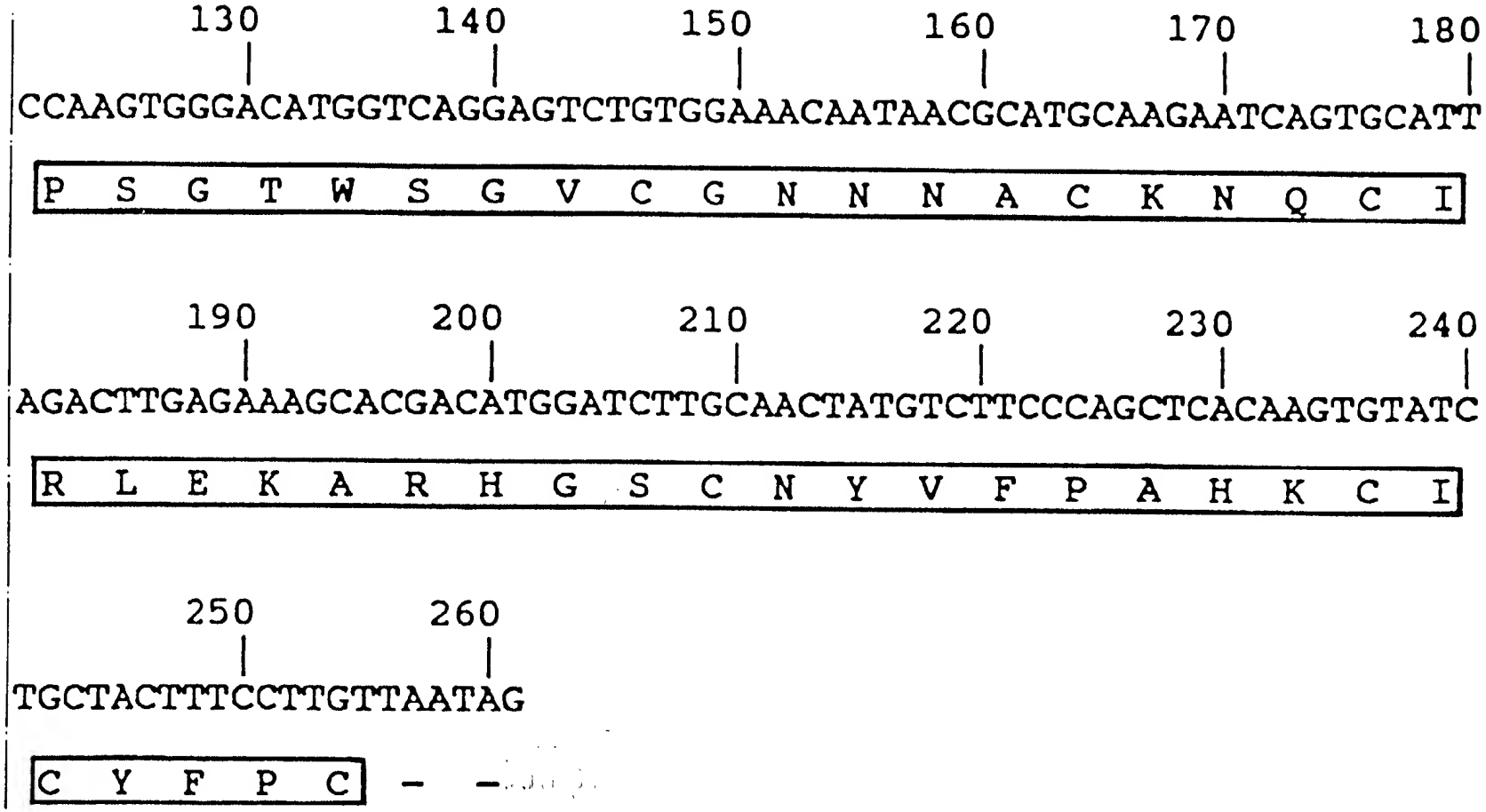

CCCCGGGCTGCAG
GAATTCGCGGCCGC
10
20
30
40
50
60
GTTTTATTAGTGATCATGGCTAAGTTTGCGTCCATCATCGCACTTCTTTTTGCTGCTCTT
M A K F A S I I A L L F A A L
70
80
90
100
110
120
GTTCTTTTTGCTGCTTTCGAAGCACCAACAATGGTGGAAGCACAGAAGTTGTGCCAAAGG
V L F A A F E A P T M V E A Q K L C Q R

FIG. 37 (2/2)


130
140
150
160
170
180
CCAAGTGGGACATGGTCAGGAGTCTGTGGAAACAATAACGCATGCAAGAATCAGTGCATT
P S G T W S G V C G N N N A C K N Q C I
190
200
210
220
230
240
AGACTTGAGAAAGCACGACATGGATCTTGCAACTATGTCTTCCCAGCTCACAAGTGTATC
R L E K A R H G S C N Y V F P A H K C I
250
260
TGCTACTTTCCTTGTTAATAG
C Y F P C - -

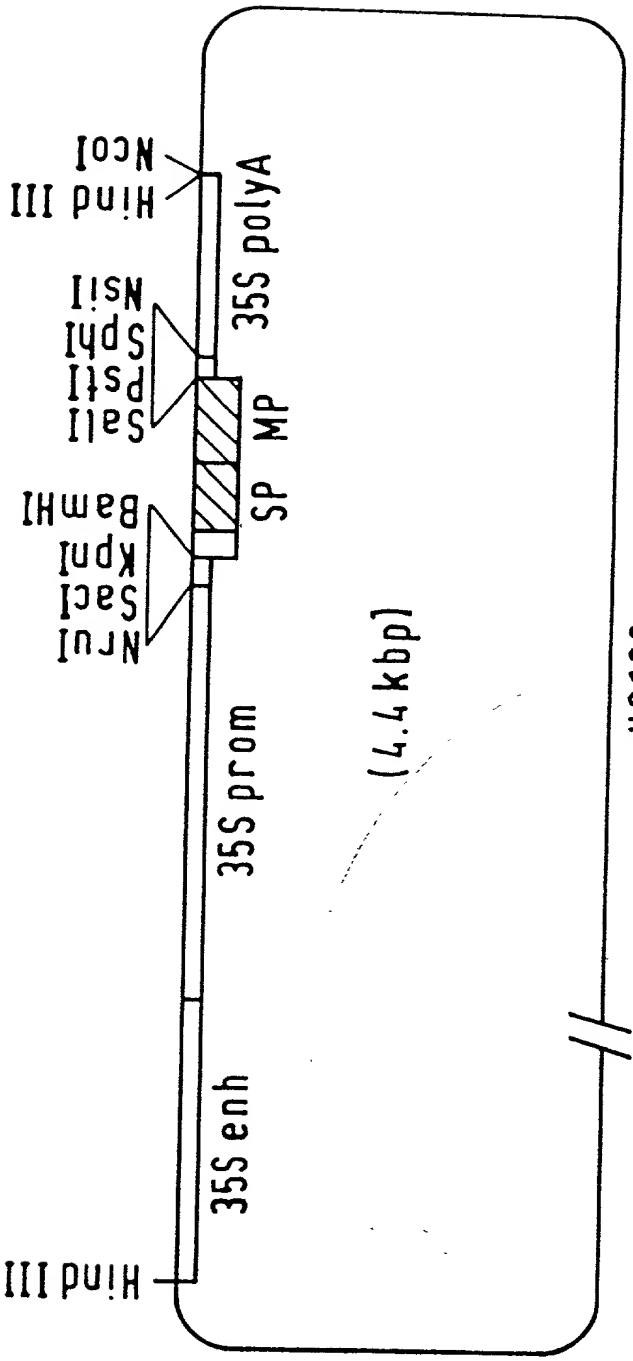
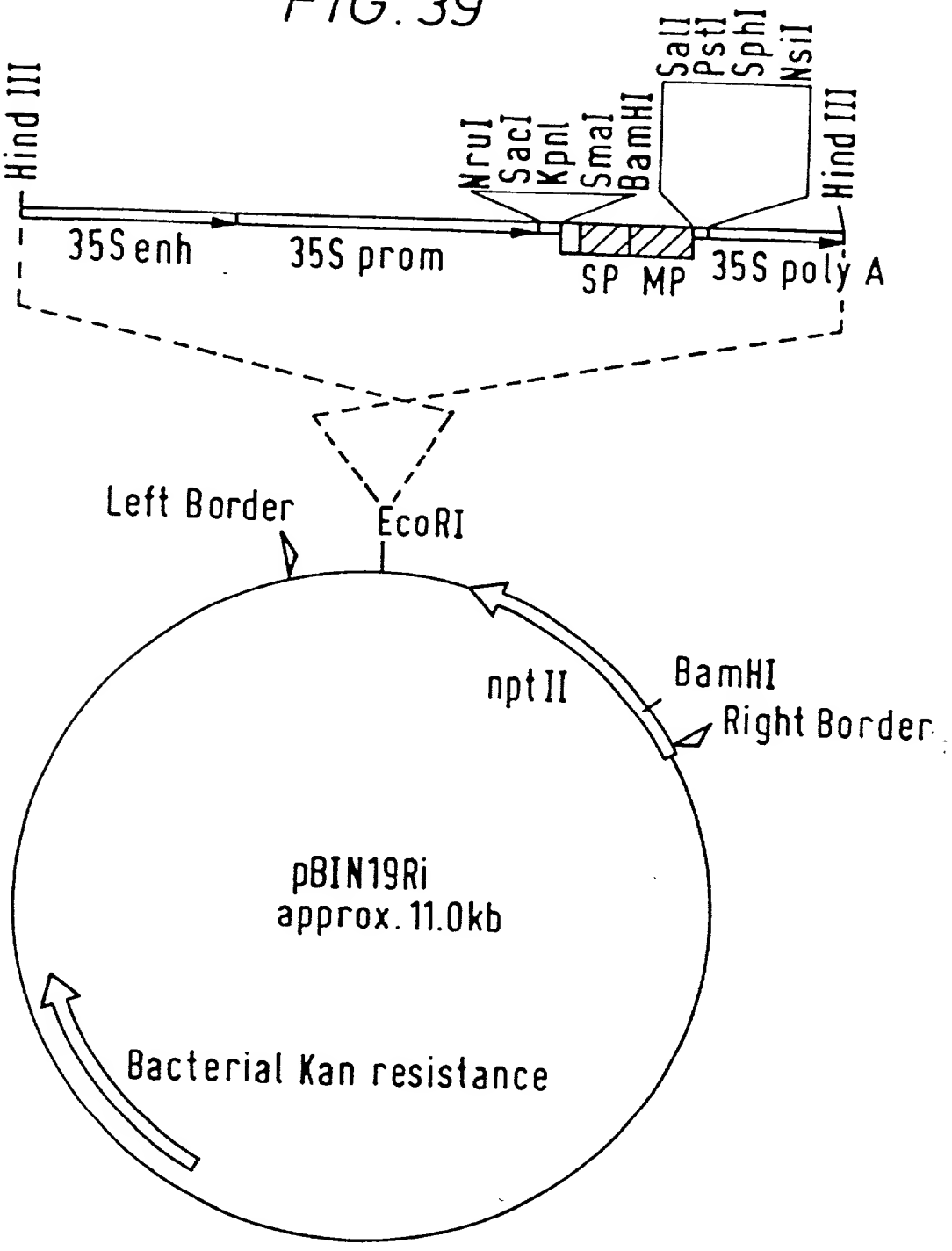

Hind III
35S enh
35S prom
NruI
SacI
KpnI
BamHI
SP
MP
SalI
PstI
SphI
NsiI
35S polyA
Hind III
NcoI
(4.4 kbp)
pUC120

FIG. 38

FIG. 39


Hind III
SalI
PstI
SphI
NsiI
NruI
SacI
KpnI
SmaI
BamHI
Hind III
35S enh
35S prom
SP MP
35S poly A
Left Border
EcoRI
nptII
BamHI
Right Border
pBIN19Ri
approx. 11.0kb
Bacterial Kan resistance